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SEVENTY-SECOND
ANNUAL REPORT
OF THE
SCHOOL COMMITTEE
OF THE
CITY OF LOWELL, MASS. *THE LIBRARY OF THE*
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THIRTY-FOURTH ANNUAL REPORT

OF THE
Superintendent of Public Schools.

1897.



LOWELL, MASS.,
MAIL PRINT, 277 CENTRAL ST.,
1898.

CITY OF LOWELL.

OFFICE OF THE SCHOOL COMMITTEE,

LOWELL, MASS., Jan. 3, 1898.

At a meeting of the School Committee, held Jan. 3, 1898, it was voted that the Committee on Reports, and the Superintendent of Schools, have leave to print their annual reports for the year 1897.

In accordance with this vote the reports are herewith submitted.

A. K. WHITCOMB, Secretary.

ORGANIZATION
OF THE
SCHOOL COMMITTEE, 1897.

ANDREW G. SWAPP, President.

ARTHUR K. WHITCOMB, Secretary.

Ward 1.—AZRO H. SCHOOLCRAFT,	46 Bowditch St.	Term Expires	1897
" 2.—THOMAS J. MULLIGAN,	Sun Office,	" "	1897
" 3.—GEORGE F. THOMAS,	417 Middlesex Street,	" "	1898
" 4.—WILLIAM J. KELLEY,	295 Central Street,	" "	1897
" 5.—HUGH F. FARLEY,	202 Concord Street,	" "	1898
" 6.—FRANK K. STEARNS,	256 Lawrence Street,	" "	1898
" 7.—ANDREW G. SWAPP,	307 Pawtucket Street,	" "	1897
" 8.—WILLARD EVERETT,	12 Belmont Street,	" "	1898
" 9.—ALBERT G. THOMPSON,	195 East Merrimack Street	" "	1897

STANDING COMMITTEES.

ON TEACHERS.—Messrs. Swapp, Everett, Kelley.

ON BOOKS AND SUPPLIES.—Messrs. Thomas, Schoolcraft, Stearns, Mulligan, Farley.

ON EVENING SCHOOLS.—Messrs. Everett, Swapp, Schoolcraft, Stearns, Kelley.

ON HIGH SCHOOL.—Messrs. Thompson, Everett, Swapp, Mulligan, Kelley.

ON PENMANSHIP AND DRAWING.—Messrs. Thomas, Schoolcraft, Farley.

ON MUSIC.—Messrs. Schoolcraft, Thompson, Farley.

ON REPORTS AND PRINTING.—Messrs. Stearns, Thomas, Farley.

ON ACCOUNTS.—Messrs. Mulligan, Thompson, Stearns.

ON SCHOOL-HOUSES AND HYGIENE.—Messrs. Swapp, Thomas, Mulligan.

ON RULES.—Messrs. Thompson, Everett, Kelley.

ASSIGNMENT OF SCHOOLS.

MR. SCHOOLCRAFT.—Edson, Eliot, Kirk Street, Cottage Street, Chapel Street.

MR. MULLIGAN.—High, Worthen Street, Cheever Street, Morrill, Dutton Street Kindergarten.

MR. THOMAS.—Lincoln, Pawtucket, Howard Street, Grand Street, Mammoth Road, Lincoln Kindergarten.

MR. KELLEY.—High, Butler, London Street, Weed Street, Agawam Street, Carter Street, Lyon Street, Agawam Street and Chapel Street Kindergartens.

MR. FARLEY.—Green, Charles Street, Central Street, Ames Street, Fayette Street.

MR. STEARNS.—Varnum, West Sixth Street, Tenth Street, Lakeview Avenue, Billings Street, Bridge Street Kindergarten.

MR. SWAPP.—High, Bartlett, Training, School Street, Cross Street, Varnum Avenue, Pawtucketville and Mt. Vernon Street Kindergartens.

MR. EVERETT.—High, Highland, Franklin, Dover Street, Powell Street, Plain Street, Middlesex Village, Franklin and Highland Kindergartens.

MR. THOMPSON.—High, Moody, Pond Street, High Street, Sycamore Street, Moody Kindergartens.

ASSIGNMENT OF EVENING SCHOOLS.

MR. EVERETT.—High, Mann, Worthen, Middlesex Village.

MR. SWAPP.—Bartlett, Green, Pawtucket.

MR. STEARNS.—Varnum, Aiken Avenue.

MR. SCHOOLCRAFT.—Edson, Colburn, High Street.

MR. KELLEY.—Butler, Franklin.

ARTHUR K. WHITCOMB, Superintendent of Public Schools.

Office in City Hall.

OFFICE HOURS.—One hour after the forenoon session of schools, and from 2 to 3 o'clock on Saturday afternoon.

TRUANT COMMISSIONERS.

JOHN F. WILLIAMS. JAMES KELLEY. WILLIAM F. THORNTON.

Office in City Hall, Third Floor.

OFFICE HOURS.—Saturday, 2 to 3 o'clock P. M. Other days 4 to 5 o'clock P. M., except during July and August, when the office will be open from 9 to 10 o'clock A. M.

REGULAR MEETINGS OF THE SCHOOL COMMITTEE.

January 25.	February 22.	March 29.	April 26,
May 31.	June 28.	July 26.	August 30.
September 27.	October 25.	November 29.	December 27.

ORGANIZATION
OF THE
SCHOOL COMMITTEE, 1898.

ANDREW G. SWAPP, President.

ARTHUR K. WHITCOMB, Secretary.

Ward 1.—AZRO H. SCHOOLCRAFT,	46 Bowditch St.	Term expires	1899
“ 2.—THOMAS J. MURPHY,	91 Dummer Street,	“ “	1899
“ 3.—GEORGE F. THOMAS,	417 Middlesex Street,	“ “	1898
“ 4.—JAMES E. DONNELLY,	36 Floyd Street,	“ “	1899
“ 5.—HUGH F. FARLEY,	202 Concord Street,	“ “	1898
“ 6.—FRANK K. STEARNS,	256 Lawrence Street,	“ “	1898
“ 7.—ANDREW G. SWAPP,	307 Pawtucket Street,	“ “	1899
“ 8.—WILLARD EVERETT,	12 Belmont Street,	“ “	1898
“ 9.—ALBERT G. THOMPSON,	195 East Merrimack Street,	“ “	1899

STANDING COMMITTEES.

ON TEACHERS.—Messrs. Swapp, Everett, Farley.

ON BOOKS AND SUPPLIES.—Messrs. Thomas, Schoolcraft, Stearns, Farley, Murphy.

ON EVENING SCHOOLS.—Messrs. Everett, Swapp, Schoolcraft, Stearns, Murphy.

ON HIGH SCHOOL.—Messrs. Thompson, Everett, Swapp, Farley, Donnelly.

ON PENMANSHIP AND DRAWING.—Messrs. Thomas, Schoolcraft, Donnelly.

ON MUSIC.—Messrs. Schoolcraft, Thompson, Donnelly.

ON REPORTS AND PRINTING.—Messrs. Stearns, Thomas, Farley.

ON ACCOUNTS.—Messrs. Donnelly, Thompson, Stearns.

ON SCHOOL-HOUSES AND HYGIENE.—Messrs. Thomas, Swapp, Murphy.

ON RULES.—Messrs. Murphy, Thompson, Everett.

ASSIGNMENT OF SCHOOLS.

MR. SCHOOLCRAFT.—Edson, Eliot, Kirk Street, Chapel Street.

MR. MURPHY.—Green, Worthen Street, Cheever Street, Morrill, Worthen Street Kindergarten.

MR. THOMAS.—Lincoln, Howard Street, Grand Street, Lincoln Kindergarten.

MR. DONNELLY.—High, Butler, London Street, Weed Street, Agawam Street, Carter Street, Lyon Street, Agawam Street and Chapel Street Kindergartens.

MR. FARLEY.—High, Charles Street, Central Street, Ames Street, Fayette Street.

MR. STEARNS.—Varnum, West Sixth Street, Tenth Street, Lakeview Avenue, Billings Street, Bridge Street Kindergarten.

MR. SWAPP.—High, Bartlett, Pawtucket, Training, School Street, Cross Street, Cabot Street, Mammoth Road, Lexington Avenue, Pawtucketville, Training and Bartlett Kindergartens.

MR. EVERETT.—High, Highland, Franklin, Dover Street, Powell Street, Plain Street, Pine Street, Middlesex Village, Franklin and Dover Street Kindergartens.

MR. THOMPSON.—High, Moody, Pond Street, High Street, Sycamore Street, Moody Kindergartens.

ASSIGNMENT OF EVENING SCHOOLS.

MR. EVERETT.—High, Mann, Howard Street.

MR. SWAPP.—Bartlett, Green, Pawtucket.

MR. STEARNS.—Varnum, Aiken Avenue.

MR. SCHOOLCRAFT.—Edson, Colburn, High Street.

MR. MURPHY.—Butler, Franklin.

ARTHUR K. WHITCOMB, Superintendent of Public Schools.

Office in City Hall.

OFFICE HOURS.—One hour after the forenoon session of schools, and from 2 to 3 o'clock on Saturday afternoon.

Telephone 566-4.

JOHN F. WILLIAMS, School Supply Room.

Telephone 549.5.

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REGULAR MEETINGS OF THE SCHOOL COMMITTEE.

January 31. February 28. March 28. April 25.

May 30. June 27. July 25. August 29.

September 26. October 31. November 28. December 26.

REPORTS.



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Report of the School Committee.

In the year 1842 the statute requiring School Committees "to make annually a detailed report of the condition of the several public schools" was enacted. With succeeding years this work has so increased as to necessitate the employment of paid agents to attend to the details of their work, and the report of this agent in Lowell, the superintendent of schools, which is herewith presented, is a practical compliance with the law. To it the public is referred for the usual statistics relating to the attendance of pupils and the cost of maintaining the schools, as well as for a careful review of the year's work; the conclusions which its author has reached and the suggestions and recommendations which his experience leads him to make. Our own report relates simply to the doings of the Board, to the opinions we hold, and to such recommendations as we wish to make.

In the general policy of your Committee toward the schools no change has been made during the past year. We now have the kindergarten, the primary, the grammar and the high school so related that the way is open for every child in the city to pass directly on by the road of the public school from his mother's knee to the university. In our elementary evening schools we offer the opportunity to acquire the rudiments of an education, and in the evening high school the privilege of broadening that education through a course of three years. Our training school for teachers still maintains its high standard of excellence.

In the course of study the Board has made but one radical change ; the substitution of vertical for slant penmanship in all the grades where writing is taught. This change was made after long and careful consideration of all phases of the question. Thus far the results have fully met our expectations. With the exception just noted the Committee as a whole has not concerned itself actively in the detail work of the schools. For such a task our previous training has given us no special fitness and we have felt that it was the part of wisdom to leave to the superintendent and teachers all matters in which they might claim to be experts. There are, however, one or two

subjects in which your Committee may properly take more than a passing interest: First,—

THE HOUSING OF THE CHILDREN

will always remain a matter of the utmost importance. And here we desire to return thanks to the City Council for the additions which have recently been made to the school houses of the city. Four new buildings and two annexes have been finished during the year, containing in all thirty-seven rooms with seats for more than two thousand pupils. We also desire to express our hearty approval of the final decision to double the size of the Varnum School building, and our gratification that the work which was begun last October has been rapidly carried forward, and that there is a fair prospect of its completion early next summer. In this connection we desire to urge strenuously, if the best results are to be obtained, the necessity of further accommodations for our high school. One department of this school has already been transferred to a rented building a long distance from Kirk Street. The number of pupils is increasing with each new school year and this increase will necessitate the renting of other buildings in the near future unless relief is found in the way mentioned. The high school

has come to be properly called "the people's college." Not more than ten per cent. of its pupils carry their education further, and while this is to be regretted, we may rejoice that the Lowell high school of today is doing work along several lines that is fully as advanced as work done in many colleges thirty years ago. To be a real "people's" college, however, it must teach something more than the traditional Greek, and Latin, and mathematics. It must meet the needs of the people by adding such courses of study as modern conditions require. The colleges are demanding of high schools better appliances and more scientific teaching of the natural sciences, and the people are demanding stenography, typewriting, and the studies which help to make up a first-class business education. Such demands cannot pass unnoticed; on the contrary, it is our belief that a compliance with these requirements would largely increase the interest and attendance at our high school. But we cannot do all this until we have more room. For the last two years the superintendent of schools has been pleading for the erection of a building on the land already bought for such a purpose, at the corner of John and Paige Streets. The lack of a proper place for the high school regiment to drill and the needs of the manual

training department render the erection of such a building imperative if there were not other reasons for its construction. In all these respects we wish to indorse his request and to express the opinion that the erection of a new building on the lot referred to is a matter to which our City Council should give its earliest attention.

The second subject to which we invite your attention is the standard of excellence of our instructors. To be able to declare that the public schools of Lowell compare favorably with those of other cities is, we believe, not sufficient, and whenever and wherever there can be found a means of improvement which can be incorporated into our system, it should, upon approval of the Board, be at once applied. The city of Indianapolis, Ind., has, by a plan of organized co-operation, acquired an enviable reputation for the excellence of its public schools. They are largely under the control of a superintendent and corps of ten or more assistants, and no important move is made unless sanctioned by the whole corps. For example, the act of visiting schools by the teachers in search of information pertaining to their work, is so regulated that much good accrues to the seeker and a corresponding benefit to the pupil. It is through

such channels that a spirit of enquiry is developed and the demand for a more general intelligence satisfied. We would recommend to the careful consideration of the Board these fine features of the Indianapolis system with a view to their adoption.

FUNCTIONS OF COMMITTEES.

Through the creation of the department of purchasing agent by the City Council one year ago the duty of obtaining supplies, heretofore performed by the Books and Supply Committee, was transferred to that office. We question the advisability of this change inasmuch as the work was done in an impartial and economical manner and with a promptness that always gave satisfaction to those in waiting. We would be glad to see this function returned to its original place. We would suggest that all text books be selected by the superintendent jointly with the teachers and bought with the authority of the same committee as before.

STATE NORMAL SCHOOL.

The opening of our State Normal School in a new and beautiful building, pleasantly and conveniently situated at the corner of Broadway and Wilder Streets, in October last, is an evidence of the increasing

interest of our State and city in the cause of public education. It is a source of much gratification that here in our city of working people there has arisen a structure so magnificent in its proportions, so elegant in its architecture and convenient in its arrangements, and so worthy of the cause to which it is devoted. For the principal of this institution the authorities selected Mr. Frank F. Coburn, whose services as master of our high school during the past thirteen years have been of inestimable value to our city. In Mr. Cyrus W. Irish, elected to succeed Mr. Coburn, the Board feel that the same good scholarship and honest endeavor will continue to be brought to bear upon the school work.

Your Committee also desire to manifest their hearty appreciation of the untiring labors and faithful ministrations of Miss Martha A. Neal, who, for a full half century, has given her life and efforts to the care and teaching of the young. In such an one is exemplified the truth of the saying that it is not the school-house but the teacher that makes the school. They were indeed fortunate who passed under her training. On them her painstaking labors leave an impress that will be transmitted to generations yet unborn.

The School Board for 1897 has been an excep-

tionally harmonious body and has performed no inconsiderable amount of work. About fifty meetings of standing committees have been held, in only one of which has action failed to be unanimous. Seven of the nine members of the Committee have been re-elected or will hold over for next year. To the retiring members, those who remain desire to express the regard due to pleasant and companionable fellow workers, and a high appreciation of their services this year. Let us close our report with the hope that the future growth of our city may witness the erection of school-houses for the education of our children adequate to the demand. And may there be an earnest co-operation of parents, superintendent, and teachers, so that our schools may merit a high reputation at home and abroad, and the community at large, in some degree, be made wiser and better.

FRANK K. STEARNS.

GEO. F. THOMAS.

HUGH F. FARLEY.

Report of the Superintendent of Schools.

OFFICE OF THE SUPERINTENDENT OF SCHOOLS,
DECEMBER 31, 1897.

GENTLEMEN OF THE SCHOOL COMMITTEE:

In accordance with the Rules of the School Committee I have the honor to submit the following as my report for the year 1897.

SUMMARY OF STATISTICS.

Value of real and personal property	\$70,389,020
Population, estimated (84,359 by census 1895)	90,000
Number of polls	25,140
Decrease for the year	180
Number of children between five and fifteen years of age, May 1, 1897	14,432
Ward One, 1027; Ward Two, 1688; Ward Three, 1521; Ward Four, 1639; Ward Five, 1181; Ward Six, 1849; Ward Seven, 2583; Ward Eight, 1583; Ward Nine, 1361.	
Number of public schools	46
One High, nine Grammar, thirty-three Primary, two Mixed, one Training.	
Number of Kindergartens	12
Number of public school buildings	51

Number of school rooms in actual use	256
High, 24 ; Grammar, 107 ; Primary, 107 ; Mixed, 5 ; Kindergarten, 13.	
Number of elected teachers employed, Dec. 31, 1897	259
High School, seven men, seventeen women.	
Grammar Schools, nine men, eighty-four women.	
Primary Schools, one hundred and four women.	
Training School, four women.	
Mixed Schools, four women.	
Kindergartens, twenty-two women.	
One Supervisor of Kindergartens.	
Two teachers of penmanship.	
One teacher of drawing.	
One teacher of music.	
One teacher of sewing.	
One teacher of elocution and physical culture.	
One military instructor.	
Number of temporary teachers employed	35
Number of teachers of Evening Schools, term of 1896-'97	158
Whole number enrolled in Evening Schools, term of 1896-'97	3,542
Whole number enrolled in day schools	12,479
Whole number enrolled in Kindergartens	1,025
Average number belonging to day schools	9,702
High, 708 ; Grammar, 4620 ; Primary, 4264 ; Mixed, 110.	
Average number belonging to Kindergartens	441
Average attendance	10,010
High, 680 ; Grammar, 4351 ; Primary, 3873 ; Mixed, 106.	
Average attendance in the Kindergartens	370
Average number belonging to each teacher	40
High, 30 ; Grammar, 43 ; Primary, 39 ; Mixed, 28; Kindergartens, 22.	
Average number belonging to each room	40
High, 30 ; Grammar, 43 ; Primary, 40 ; Mixed, 28.	
Average number belonging to each Kindergarten	46

Average per cent. of attendance	93
High, 96; Grammar, 94; Primary, 90; Mixed, 89.	
Average per cent. of attendance in Kindergartens	81
Average cost of each pupil for tuition only, based on the average number belonging	\$18.67
High, \$31.67; Grammar, \$18.10; Primary and Mixed, \$15.51.	
Average cost of Kindergartens	\$21.76

RECEIPTS AND EXPENDITURES.

RECEIPTS.

Balance on hand Jan. 1, 1897	\$3,402.53
Appropriated and assessed	192,500.00
Appropriated from general treasury fund	81,500.00
Total standing to credit of schools	<u>\$277,402.53</u>

EXPENDITURES.

Paid to teachers of Day Schools :—

High School	\$22,479.00
Grammar Schools.—Bartlett School	\$7,341.25
Butler School	10,355.88
Edson School	8,339.25
Green School	7,829.93
Highland School	10,514.00
A. Lincoln School	5,976.15
Moody School	6,773.50
Pawtucket School	5,666.53
Varnum School	9,305.99
	<u> </u>
Primary and Mixed Schools	72,102.48
Training School	65,387.64
Kindergartens	11,755.01
Teachers of Penmanship	12,066.50
Teacher of Drawing	2,150.00
	<u> </u>
<i>Amount carried forward</i>	\$187,190.63

Amount brought forward \$187,190.63

Teacher of Music	1,200.00
Teacher of Sewing	800.00
Military Instructor	250.00

Total paid for instruction in day schools inclusive of Military instruction in High School \$189,440.63

Evening Schools :—

Teachers	\$15,419.25
Janitors	1,798.25
Lighting	1,220.53
Incidentals	818.36
	—————
	19,256.39

Drawing School :—

Teachers	3,723.33
Janitors	91.00
Lighting	146.26
Incidentals	151.72
	—————
	4,112.31

Fuel	15,735.38
Water	2,042.63
Gas for day schools	370.70
Rents of buildings for school uses	2,508.48
Janitors for rented buildings	260.83
Bills of Supt. of Public Buildings for repairs	2,559.48
Repairs, furniture, curtains, etc.	703.31
Text books.	8,659.43
Writing books, stationery, etc.	3,637.89
Rebinding school books	245.79
Census of school children	746.00
Bills of Middlesex County, board of truants	4,127.14
Manual Training, machinery, equipment, etc.	5,903.60
Printing, including annual reports	1,161.66
Kindergarten, equipment and supplies	1,157.52
Janitors' supplies	927.47
Board of horses, repairs of wagons, etc.	669.77
Power for ventilating purposes	460.99

Amount carried forward \$264,687.40

<i>Amount brought forward</i>	.	.	.	.	\$264,687.40
Material for sewing classes	.	.	.	.	147.90
Furniture for new houses, pianos, etc.	.	.	.	.	725.00
Apparatus and material for High School	.	.	.	.	442.07
High School regiment	.	.	.	.	263.80
High School graduation	.	.	.	.	138.75
Training School, supplies, lectures, graduating exercises, etc.	.	.	.	.	252.54
Salary of Superintendent of Schools	.	.	.	.	3,000.00
Truant officers	.	.	.	.	3,000.00
Clerical service	.	.	.	.	560.50
Miscellaneous	.	.	.	.	4,168.68
Total expenditures	.	.	.	.	\$277,386.64
Balance to general treasury fund	.	.	.	.	15.89
					\$277,402.53

SCHOOL HOUSES.

RECEIPTS.

Balance undrawn Jan. 1, 1897	.	.	.	.	\$ 809.05
Appropriated and assessed	.	.	.	.	31,500.00
Appropriated from general treasury fund	9,400.00
Received from other sources	6,825.70
 					<hr/>
Total	\$48,534.75
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EXPENDITURES.

Janitors	\$25,293.76
General repairs	23,236.21
Balance carried to general treasury fund	4.78
Total	\$48,534.75

REPORT OF THE SUPERINTENDENT.

ADDITION TO A. LINCOLN SCHOOL.

Balance on hand Jan. 1, 1897	\$1,434.75
Transferred from Appro. New School Houses	4,900.00
Expenditures	<hr/>
	\$6,334.75

NEW SCHOOL HOUSES.

Balance on hand Jan. 1, 1897	\$51,000.00
Transferred	49,000.00
Balance on hand Jan. 1, 1898	<hr/> \$2,000.00

LEXINGTON AVENUE SCHOOL.

Balance on hand Jan. 1, 1897	\$2,207.67
Transferred	3,000.00
Receipt	6.26
Expenditures	<hr/> \$5,213.93

ADDITION TO PLAIN STREET SCHOOL.

Balance on hand Jan. 1 1897	\$ 617.83
Transferred	2,800.00
Total	<hr/> \$3,417.83
Expenditures	3,231.12
Balance on hand Jan. 1, 1898	<hr/> \$186.71

BARTLETT SCHOOL.

Balance on hand Jan. 1, 1897	\$30,936.17
Transferred	10,000.00
Total	<u>\$40,936.17</u>
Expenditures	40,898.29
Balance on hand Jan. 1, 1898	<u>\$37.88</u>

CARTER STREET SCHOOL.

Balance on hand Jan. 1, 1897	\$ 2,331.70
Transferred	25,000.00
Total	<u>\$27,331.70</u>
Expenditures	26,973.79
Balance on hand Jan. 1, 1898	<u>\$357.91</u>

ADDITION TO VARNUM SCHOOL.

Balance on hand Jan. 1, 1897	\$24,940.08
Transferred	25,000.00
Total	<u>\$49,940.08</u>
Expenditures	32,033.58
Balance on hand Jan. 1, 1898	<u>\$17,906.50</u>

PINE STREET SCHOOL.

Balance on hand Jan. 1, 1897	\$3,001.49
Transferred	3,300.00
Expenditures	<u>\$6,301.49</u>

MOODY STREET SCHOOL.

Appropriated from General Treasury Fund	\$20,000.00
Expenditures	5,882.92
Balance on hand Jan. 1, 1898	<u>\$14,117.08</u>

The school census of 1895 was 13,343. In 1896, as returned by the enumerators, it was 13,619, and teachers found in the schools 2771 more children whose names were not, apparently, on the census-takers' lists. I say "apparently" because it was evident that mistakes in spelling and other errors were responsible for many of the omissions. In 1897 the enumerators' lists were again compared with a school enrolment, but more care had evidently been taken in the census, and the number of names needing to be added was far less than in 1896. Instead of adding these without question, however, they were shown to the enumerators (except the list from Ward 7, which came in too near the end of the school year to permit of such examination) and they were given further time to investigate and make corrections. As was expected the apparent omissions were often found to be due to errors in name, residence or ward, and the number of names really needing to be added was not very great. The final result, however, has been to give us, probably, the best census ever taken, and the result, 14,432 can be but little less than an exact enumeration of all the children in the city between the ages of 5 and 15 at a given date.

A proposed revision of school-laws, which will be presented to the legislature this winter by the state board of education, changes the time of taking the school census from May to September, a change whose advantages are so obvious, and so great, that its importance can hardly be over estimated.

The number of pupils in the schools continues to increase, though but slowly, the enrolment, including kindergartens, having risen from 13,213 in 1896 to 13,504 in 1897 and the average number belonging from 9,995 to 10,150. The very general prevalence of the measles through a large part of the year reduced the attendance in the kindergartens and primaries somewhat, but the per cent. of attendance in the grammar schools shows a gratifying improvement from 92% in 1896 to 94% in 1897.

One of the duties of the Superintendent is to "equalize

attendance" at the several schools, and the duty has never, I think, been so perplexing, or performed with so little satisfaction to myself, as this year. A room with less than the average attendance in one part of the city affords no means of relief to an overcrowded one miles away, and most annoying differences of this kind have existed all the year. The first room at the Varnum school, for instance, began the September term with sixty-five pupils, and the lowest room in the Mammoth Road school now has an attendance of sixty, while the December report shows no less than twenty-two rooms elsewhere in the city with less than thirty pupils apiece, and two with only eighteen each. In self defense I wish to assert that those with less than twenty pupils continue to exist through no fault of mine. To cure some ills of this sort the Committee, at its meeting Dec. 27, voted to close the Cottage Street school of two rooms, and to distribute its pupils among the three adjoining schools where there is abundant room for them, a course of action which might, I think, be followed with advantage in two or three other places, so far at least as the closing of single rooms is concerned.

I dislike very much to be out of touch with the educational opinion which is now finding such frequent expression, on the platform at least, that schools should be much smaller. I heard President Eliot of Harvard, for instance, say that to the strong men who hold Harvard professorships they never think of assigning more than twenty-five students, and the giving of more than this number of children to a young girl, perhaps only just out of school herself, seemed to him a proper subject for the ridicule of which he is such a master. In Lowell, recently, the tumultuous applause which greeted Principal Beckwith of the Salem Normal School when he asserted that the need of the times, so far as teachers are concerned, is for "less pupils and more pay" showed, I suppose, the trend of opinion at home. At the risk, however, of being counted an old fogey I want to assert that schools of reasonable size are not only demanded by a proper regard for economy, but that they actually do

better work than is usually done in very small ones. As master of a grammar school for a dozen years I always found that a room which became much reduced in numbers did distinctly poorer work. Nor is my experience unusual. Miss Emerson of the High Street school, whose numbers were formerly large but were last year exceptionally small told me at the close of the year in June that she had never worked so hard as with her small class, and never with such unsatisfactory results, and she is now rejoicing that since September her numbers have largely increased. Nor is her testimony unusual; in fact I know of but one or two teachers in the city who really prefer "baby" classes. Situated as we are in Lowell, with taxes high and money scarce I think we are bound to make forty-five pupils to the teacher the standard, and to consider a variation of more than five from that standard a thing to be regretted. And happily this number is not only the one demanded by a proper economy but it is also, in my opinion, one which permits the very best results in teaching. In this connection I can not refrain from noting that in both primary and grammar schools the upper grades have usually less pupils to the room than the lower ones, and I can not help wondering whether this state of affairs would long continue if the principals and masters were to teach the lower classes. Any-way, I should like to have the experiment tried awhile and see the result.

The expenses of the School department were \$277,386.64 and \$3,311.98 were collected for tuitions and turned into the general treasury fund. The balance on hand at the beginning of the year was \$3,402.53, and the appropriation asked for was \$275,000, of which \$274,000 was granted, either as appropriation or transfer.

For 1898 the expenses will unquestionably be larger. The number of teachers employed will be enough greater to increase the salary bills several thousand dollars, and I know of no place where expenses can be reduced, though the amount needed to complete the equipment of the manual training school will, I hope, be less in 1898

than in 1897. At least \$290,000 will be needed for the proper conduct of the schools in 1898, and \$10,000 more could profitably be expended for apparatus for the high school, books for supplementary reading in all the schools, and other such uses entirely appropriate and desirable but which are not, perhaps, absolutely necessary.

SCHOOL HOUSES.

Never in the history of the city probably, have so many new school houses been finished as in the year 1897. A three-room addition to the Plain Street school was opened for use January 4, and the new Bartlett house of sixteen rooms, the Carter Street house of eight rooms, the Pine Street house of four rooms, the Lexington Avenue house of two rooms, and a four-room addition to the Lincoln school house were opened in September. The number of seats for pupils thus added to previous accommodations is 2,016. At Carter Street all the rooms are now occupied, the primary school having expanded from three rooms to five, all very full, and the other three rooms being occupied by overflows from the Butler school. This section is, therefore, well supplied with school accommodations for today, but will need more in the near future. The increase should be, I think, in the form of further additions to the Butler school building, and in anticipation of the same the vacant lot at the north of the school house ought to be secured at once, action which has already been suggested by the School Committee to the City Council.

The new Bartlett school building is not only the largest but, as might be expected of the newest, is easily the finest of our grammar school buildings. It is quite plain architecturally, nothing whatever having been wasted for show, but within is a model of convenient arrangement. The side hill upon which it is built made it easy to have the basements exceptionally high and well ventilated. On the

two floors above wide corridors run the whole length of the building, with two wide entrances from the street for the first, and two spacious stairways for the second. The upper floor is occupied by a handsome and well lighted hall, capable of seating twelve hundred persons, with smaller rooms at each end which might well be fitted up for museums or for similar uses. The building is, of course, supplied with all the usual modern appliances in the way of ventilation, adjustable seats for pupils, store rooms for books, office for the principal with telephone connections with all the rest of the building, parlor for the teachers, etc., etc. The building was dedicated Nov. 22 with largely attended exercises, the principal address being given by Hon. Geo. F. Lawton, ex-Superintendent of Schools.

In September the kindergarten which has heretofore been housed in rented rooms on Mt. Vernon Street was transferred to the new Bartlett building, and the grammar rooms of the old school have been expanded to occupy twelve rooms, thus leaving but three unoccupied. It is probable that these will soon be filled with pupils for a primary school, taken from the School Street and Cross Street schools, and that every room will thus be occupied.

In giving the use of the new Bartlett school to the state normal school, as has recently been done, the city has thus followed the example of other places where normal schools have recently been established, and has given its best.

The Lexington Avenue school is about two miles above Pawtucket bridge, on the road to Nashua. Its attendance in the past has been very small, at one time sinking to two pupils with an average attendance of 70% ! Attempts have been made more than once to close the school and transport the pupils to the Pawtucket school, a plan which would, in my opinion, have been of very great advantage to the pupils, but all such proposals have been rejected, and in the meantime the little old one-room building was actually rotting down, and the Committee was forced to ask for something

better in its place. Only one room was asked for, but the City Council, holding that a two-story building with two rooms would cost but little more than a one-room building and really be much better, erected a building of two rooms, only one of which is now occupied, or, so far as we can see, is ever likely to be. The attendance, however, has increased somewhat for the last two or three years, and is now about thirty. The school is ungraded.

At Plain Street five of the six rooms are occupied, but they are not crowded, and the sixth room ought to provide for all prospective growth in this section for a long time to come. At the Lincoln school there are three rooms yet unoccupied, though one is likely to be filled in February, 1898.

The two sections of the city still needing more school room accommodations, Pawtucketville and Centralville, will soon be provided for by buildings now in process of erection, a six-room primary school building in Pawtucketville, and an eight-room addition to the Varnum school in Centralville. Both are greatly needed, and their early completion will be greatly appreciated.

I am very glad that the Committee on Reports has endorsed so strongly the recommendations of the last two years for a new building to be used for high school purposes at the corner of John and Paige Streets. As this committee has said so much and said it so well it only remains to say here that my opinion remains the same, and that the need of the building asked for grows greater every year.

TEACHERS AND SCHOOLS.

Changes in the roll of teachers by elections and transfers will be found in the appendix.

For the first time I have the great pleasure of writing a report which records no break in the ranks of teachers by death. In six

previous reports I have recorded nine deaths, and our immunity this year is a cause of gratitude for all.

This report is not the place for eulogies of those who leave us by resignation, however worthy or much regretted, but a service of fifty years is so unusual as to justify a word of comment. Miss Neal of the Cabot Street school, who resigned last June, did so after a half century of work in the school-room. A public reception was given her in the high school hall June 30, which was a most gratifying testimonial to the high esteem in which she has always been held. Miss Neal loved her pupils, and they loved her. At her reception middle-aged men came half way across the continent to testify with choking voice and wet cheeks to their affection for a former teacher. Miss Neal had taught books well all her life, but of this her ex-pupils spoke little; she had put her heart into her teaching, had sympathized with her pupils, helped them, loved them, and of their gratitude for this, and of her influence upon their lives, they could not say enough. The lesson for those of us who remain is obvious; may it bear fruit in all our lives.

HIGH SCHOOL.

The high school year has been made memorable by the resignation of Mr. Coburn, for thirteen years principal of the school, and the election of M^r. Irish to succeed him. Mr. Coburn is a man of excellent judgment and even temper, a good organizer and disciplinarian, and the school had always been so safe in his hands that his departure was a matter of general regret, though all joined in congratulating him upon his appointment to a higher position. Mr. Irish has already proved himself a worthy successor of any who have gone before him. Attempting no radical changes he has yet picked up many loose ends, and the school has every prospect of success and growth under his administration.

The courses of study have been slightly changed in a way to improve them in my opinion. The regular work in English has been strengthened, and half time work in English has been added to the studies of every term where it was not already a full time study. An extended college course of five years has been restored, without displacing at all the one of four years, an excellent feature in my opinion. The four years' course is necessarily a very severe one, and while it will still, no doubt, be chosen by ambitious students, judicious parents will, I am sure, consult the best good of their children by very generally selecting the longer course.

The class which graduated in June was by far the largest in the history of the school. The exercises were held in Huntington hall, the last that can be held there unless the hall shall be rebuilt, it having been destroyed by fire Dec. 9. In accordance with custom the programme of the graduating exercises, the names of the graduates and of the Carney Medal scholars are herewith given :

PROGRAMME.

1. MARCH, Harvard Students, *Ramsdell*
AMERICAN ORCHESTRA.
2. OVERTURE, Romantic, *Kela-Bela*
AMERICAN ORCHESTRA.
3. MUSIC, The Herdsman's Home, *Abt*
4. SALUTATORY, "Twice told tales," written by Florence Miller
MARY ELIZABETH THOMAS.
5. MUSIC, When Evening's Twilight, *Hatton*
6. ADDRESS,
HON. WILLIAM S. KNOX, MEMBER OF CONGRESS
FROM FIFTH MASS. DISTRICT.
7. SELECTION, from "The Wizard of the Nile," *Victor Herbert*
AMERICAN ORCHESTRA.
8. VALEDICTORY, Ancient and Modern Education,
GEORGE HANCOCK DONEHUE.

9. MUSIC, { *a* Hark, the Sound of Evening Bells, *Mendelssohn*
b Comin' Thro' the Rye,

SEMI-CHORUS.

10. PRESENTATION OF CARNEY MEDALS,
 SUPERINTENDENT A. K. WHITCOMB.

11. PRESENTATION OF DIPLOMAS,
 HIS HONOR, MAYOR WILLIAM F. COURTNEY.

12. SINGING OF CLASS ODE,
 WORDS BY HELEN ENDICOTT SAWTELLE. MUSIC BY F. R. RIX.

We pause a moment ere we leave
 The school-life of our choice,
 For faults and wasted time we grieve,
 For knowledge gained rejoice.

The past, behind, in shadow lies,
 Still speeds the present hour,
 The future, thought of fear defies,
 With trust in higher power.

The watchword "Onward" guide our life,
 To triumph be our call.
 Despairing never, e'en in strife
 For "Labor conquers all."

13. FINALE, Concert March, *Morse*
 AMERICAN ORCHESTRA.

Graduates for 1897.

FOUR YEARS' COURSE.

Arthur Armitstead.	Alvin Edward Sykes.
Isaac Walwin Barr.	Jesse Russell Taft.
John Ernest Barr.	Leon Rhodes Thurlow.
Alfred Herbert Berry.	Leavitt R. J. Varnum.
Roland Wendell Black.	George Frank Waugh.
Kenneth Reuben Bruce.	Rufus Mason Whittet.
Josiah Butler.	Leslie John Wisener.
Lester Hoyt Butterfield.	Effie Belle Allen.
Harold Caverly.	Alice Helen Bacheller.
Fred Ward Coburn.	Elvena Louisa Bell.
Amos Harold Fitzgerald.	Nellie Frances Bryant.
George Fletcher Gardner.	Lillian Chloe Burbank.
Amasa Hawthorne Howard.	Bertha Marilla Cady.

William Hanson Howard, Jr.	Laura Etta Campbell.
George Francis Lamson.	Mary Hilton Coburn.
Harold Lawton.	Mary Jane Dix.
Frank Joshua Libby.	Alice France Duckworth.
Royal Fred Miller.	Ethel Metcalf Everett.
James Francis Monaghan.	Mabel Thompson Everett.
Ernest Parker.	Edith Therese Farrington.
Oliver Hazard Perry, Jr.	Emerett Adella Fogg.
John Joseph Phelan.	Amy Helen Goodhue.
Stanley Elroy Qua.	Eva May Goss.
John Augustine Seede.	Alice Maud Greathead.
George Morton Spear.	Mabel Haywood Hall.
Ida Eleanor Hunter.	Lena Maude Rollins.
Grace Densmore Hutchinson.	Helen Endicott Sawtelle.
Katharine Marie Jantzen.	Nellie Harris Stevens.
Maude Jarvis.	Louisa Stone Stevenson.
Ethel Elizabeth Kimball.	Anna Grace Tinkham.
Ethel Eddy Livingston.	Lucena Inez Vinall.
Edna Gertrude MacBrayne.	Charlotte Clare Walsh.
Mabel Metcalf.	Margaret Thomson Watson.
Florence Miller.	Alice Belle Williams.
Edith Alice Nevers.	Bertha Elizabeth Wilson.
Lucy Harriet Parker.	Annie Grace Wood.
Alice Richardson.	Ida Alberta Woodies.

THREE YEARS' COURSE.

Edward Willman Badmington.	Martin Hovhannes Garo.
Walter Henry Bagshaw, Jr.	Everett Addison Hadley.
Hayward Moore Bartlett.	Dennis Frederick Haley.
Edward James Clark.	Oscar Rudolph Johnson.
Claude Forris Coburn.	Walter Fay King.
Jeremiah Francis Connors.	Percey Fox Kingsbury.
Joseph Francis Corcoran.	John Steven Mahoney.
John Albert McCook Delaney.	Patrick Joseph Meehan.
George Hancock Donehue.	Walter Nelson Ober.
Louis Etchells.	Dennis Francis O'Neill.
Francis Joseph Farley.	John Stephen Palm.
Thomas Joseph Fitzgerald.	George Francis Puffer.
Edward John Francis.	Robert Reid Sleeper.
Franklin Maynard Spear.	Helen Anastasia Howard.
Arthur Bickford Strout.	Margaret Grace Hyde.
Walter Werden Thorne.	Annie Maria Jones.
Sarah Louise Bambrick.	Josephine Theresa Kelly.
Laura Marie Beaulieu.	Winnifred Anastasia King.

Daisy Blanche Blood.	Marie Yvonne Lemaitre.
Grace Maud Boynton.	Mary Sophronia Livingston.
Minnie Matilda Brown.	Alice Wheaton Manchester.
Florence Jane Charlton.	Mary Verena Jane McElroy.
Katharine Helen Coggeshall.	Mary Ellen Gertrude McKenzie.
Helen Louise Conant.	Bertha Minnie Merrill.
Susan Agnes Costello.	Catherine Agness Minahan.
Helen Marie Coughlin.	Katherine Theresa O'Connell.
Katharine Celestia Coyne.	Mary Josephine O'Meara.
Mary Etta Crowley.	Helena Margaret O'Sullivan.
Floy Cutler.	Annette Grace Pearson.
Elizabeth Beatrice Dame.	Seola Vera Pierce.
Jeanette Prescott Dearden.	Mary Viola Puffer.
Carrie Edith Donnelly.	Lola Vesta Quinn.
Helen Annie Dow.	Lena May Reid.
Edith Frances Flint.	Rose Etta Riley.
Jennie Maria Fox.	Mary Louisa Riordan.
Florence Estelle Gilman.	Catherine Durning Rodger.
Lulu Veraconda Ginty.	Alice Belle Sherman.
Margaret Woodburn Hall.	Annie Millie Sherman.
Annie Louise Hall.	Lizzie Ellen Spofford.
Katharine Winn Halloran.	Mary Elizabeth Thomas.
Gertrude Eva Hammond.	Gertrude May Varnum.
Lenora Helena Harrington.	Helen Camilla Wholey.
Josephine Madeline Hennessy.	Irene Estelle Wyman.
Catharine Veracunda Hickey.	Maud Muller Young.
Martha Anastasia Holden.	

CARNEY MEDAL SCHOLARS.

George Hancock Donehue.	Louise Stone Stevenson.
John Augustine Seede.	Florence Miller.
William Hanson Howard, Jr.	Helen Annie Dow.

PRIMARY AND GRAMMAR SCHOOLS.

Two changes in the course of study have been made, the introduction of physics in the ninth year, and a change from slant to vertical writing in all the grades of the primary and grammar schools. The work in physics was left optional with each grammar master, and seven out of ten have chosen to teach it. Gifford's Elementary Physics has been adopted as a manual, and the

apparatus recommended by its author has been furnished. It is too soon to speak positively as to results, but pupils are certainly much interested in the subject, and masters are speaking of the work in very hopeful terms.

The adoption of vertical writing was only made by the committee after an exceptionally thorough and painstaking examination, and the results thus far, as stated in their report, justify their conclusion.

The course in nature study has been slightly changed to make it conform to the plan outlined by a committee of the Educational Workers' Conference, the little manual issued by this committee being as brief and simple, and yet as complete as anything I have seen on the subject.

In the eighth grade I suggested a year ago that a little bird study be introduced. As this was a suggestion merely, and such study would have no tests by examination or value in ranking, as no text book was furnished, and especially as teachers were not supposed to be ornithologists, I expected no very striking results. I have, however, been greatly pleased to find some of the best work done in this line I have ever seen. In one school every pupil did something in the way of personal observation ; the majority looked up carefully a dozen birds or so, while four boys in the room had seen and studied before the season closed from sixty to seventy kinds. The teachers were as enthusiastic as the pupils,—as is generally the case where good work is done, and their four-o'clock-in-the-morning walks yielded them a total of over sixty birds seen between March and July. Several other schools did nearly as much, and only one, so far as I know, did nothing. The results have been excellent. Collections of eggs, the only thing I feared, have been made in only one case so far as I can learn ; on the contrary a love for bird life has been greatly quickened by its study, and health, happiness and useful knowledge have all been enhanced by what has been done.

In answer to questions asked by an agent of the state board of education the teachers of the primary and grammar schools reported last week that 572 double promotions, or promotions out of the regular course, had been made during the year. I am very glad there were so many, but confess my disappointment that there were no more. Indeed, I think that the question must have been misunderstood, and that there must have been many which were not reported. No less than ten schools reported no promotions out of course, a most astounding state of affairs. Surely there can be no school in Lowell in which there are not some pupils able to go faster than the average, and if such are not given a chance to go on then the charge of President Eliot that the pupils of our schools advance like criminals in the chain gang with a "lock step" has some basis, a charge which I have always indignantly denied. Some teachers, however, made a splendid showing, and my belief that the question was misunderstood by others is further justified by the fact that the grammar schools reported 195 pupils in the classes to graduate next June as likely to finish the course in one or more years less than the allotted time, of whom 133 were completing the nine years' course in eight years, 51 in seven years, 10 in six years and one in five years.

The average age of pupils in the several grades of the primary, grammar and high schools, as taken at the beginning of the school year in September, is as follows:—

Grade.	No. of Pupils.	Average Age. yrs.	mos.
1st	2046	6	3
2nd	1312	7	10
3d	1165	8	8
4th	1017	10	1
5th	1072	11	3
6th	934	12	3
7th	760	13	
8th	644	13	7
9th	499	14	4
10th	300	15	
11th	221	15	8
12th	196	17	1
13th	59	18	

The greatest difference in age between any two grades is 1 yr. 7 m. between the first and second. This is doubtless due largely to irregularity of attendance among small children, many staying away from school in the winter. The next, 1 yr. 5 m., is between the upper primary and the lowest grammar. This, I think, is due to holding back some children from promotion to a grammar school who would have advanced a grade if there had been a fourth year in the primary school, and also to the lack of February promotions in some sections. The fact that the time becomes less than a year in the upper grammar grades is due to some extent, I hope, to double promotions, but more, I fear, to the fact that the older scholars leave school in large numbers in these years. The average age of the pupils promoted from the grammar schools to the high school last June, at time of graduation, was 14 y. 9 m., an average younger than that of the state as a whole by several months.

TRAINING SCHOOL.

The course for pupil-teachers in the training school has been lengthened to two years, thus increasing the number of classes and of students in the school by about one-fourth. Fewer regular teachers are therefore needed, and the work for the year has been mainly done, and well done, by the under graduates. The instruction of the regular supervisors has been supplemented in some lines, especially in drawing, by special teachers, and the course has been made broader and more thorough at every point. Some excellent work has been done in experimental child study and in the discovery of physical defects among the children, the results of which, as published in several educational journals, have reflected much credit upon the school. Interest has been increased by a course of lectures or talks, mostly by local talent, which has proved a very attractive feature, and altogether the year has been a pleasant and profitable one.

The coming of a state normal school to Lowell gives the School Committee an opportunity, of which advantage will doubtless be taken at once, to strengthen the training school by raising the standard of admission. Heretofore applicants have been admitted by examination, or without examination if graduates of a Massachusetts normal school. Only a few Lowell girls have been able and willing to go away from home to attend a normal school, and most applicants, therefore, have availed themselves of the opportunity afforded by an examination. With a normal school in the city, however, difficulty in the way of attendance vanishes, and the Committee will be justified in demanding a normal school or college diploma of all applicants for the training school. Such action will doubtless be taken early in 1898, and in anticipation of it the admission of a class by examination was omitted in September, 1897.

An exhibition of work was given in connection with the graduating exercises of the school in June, which was by far the finest of the kind ever seen in Lowell, while the taking addresses of Dr. Houck of Pennsylvania, Dr. Winship of Boston, and Dr. Edmund, principal of the school, made the occasion a memorable one. Of the qualifications of the graduating class Dr. Edmund spoke in high terms, and the work done by all its members since that time has fully justified her opinion.

Following are the names of the graduates :—

CLASS OF JUNE, 1897.

Marguerite Jane Cronin.	Julia Gertrude Halloran.
Grace Clare Delaney.	Daisy Beatrice MacBrayne.
Annie Theresa Delay.	Helen Josephine O'Hearn.
Mabel Hoyt Ela.	Bride Theresa Sweeney.
Margaret Christina Fox.	Lulu Turner.

KINDERGARTENS.

The city now has twelve kindergartens, no change in their number having been made during the year. Twenty-five teachers are employed, a principal and two assistants at Bridge Street, and a principal and one assistant at each of the other schools. All are in excellent condition, and all are doing good work.

In no department of our schools has more public spirit and a greater desire for improvement been shown than among our kindergartners. All of them belong to a live organization with regular and spirited meetings. Several leading kindergartners of the country have at different times been their guests and advisers, and for solid work they all took a course of ten lessons in psychology last spring under Prof. Warren of Boston University. Since September all have taken advantage of the opening of the state normal school in Lowell to take two special courses there afternoons. The student spirit thus shown produces its natural result in their work, and there are, I believe, no better kindergartens in the state than those of Lowell.

The kindergarten normal training department was transferred to the state normal school at the close of the summer term. I confess that I was very sorry to give it up. It had been a unique feature of our school system, duplicated under similar conditions no where else in New England so far as I know, and giving to Lowell an unquestioned leadership in this line of work. First opened in January, 1893, it had graduated four classes, forty-two kindergartners, whose work whether in Lowell or elsewhere has in every case demonstrated the excellence of their training, and the department was never more popular than when it was closed. The state normal school to be opened in September would, however, assumably, have a kindergarten department, and the unwisdom, not to say the impropriety, of continuing an opposition school was obvious. The normal school, therefore, kindly arranged to receive our small senior class of kindergarten students, and our work in this line came to an end.

Our arrangements with the normal school, however, are in some respects of great advantage to us, as we hope they will also be to the state. The head of the kindergarten department in the state school remains the supervisor of the Lowell kindergartens, insuring a co-operation which cannot fail to be mutually advantageous. The state can and will furnish to students advantages in the way of equipment and special teachers which the city could not easily equal, thus insuring a supply of teachers for the future even better trained than those of the past, while the city offers to the students of the state school opportunities in the way of practice which can be equaled nowhere else in the state. Our twelve kindergartens are all open to them, not only as places to observe but as places in which to work, so that the future graduate of the kindergarten department of the state normal school at Lowell will not only have mastered the theory of the kindergarten but will really be a teacher of a year's successful experience, a consideration of unsurpassed importance. No one who knows anything of the excellent work being done in private kindergarten training schools in Boston and elsewhere in New England would wish to say anything of them except in praise, yet the difference between the private kindergartens, for which these schools mainly fit their graduates, and the public school kindergartens is very great, and for teaching in the latter the advantage of getting one's training in connection with them is so obvious that I look to see the Lowell normal school the headquarters for the state, if not for New England, for public school kindergarten work, a result, as I said before, of equal advantage to the city and to the school.

Following are the graduates of the class of June, 1897:

Edith Alberta Andrews.
Mary Isabel Baldwin.
Sarah Ina Cutting.
Edith Donald
Nettie Maria Emery.

Kate Taylor Fuller.
Josephine Anna Gould.
Edith Annie Howitt.
Mary Lucia Stewart.
Annie Florence Stratton.
Maud Frances Welsh.

MANUAL TRAINING.

In 1895 and 1896 the manual training work of the high school was carried on in two rooms in Odd Fellows' Block, Merrimack Street. These rooms were well adapted to work in drawing and carpentry, but afforded no facilities for the use of machinery. The need was evident for a building on the city's lot on John Street. This lot is a long and narrow one—226 feet long and 76 feet wide, ten feet of the width being reserved as a part of a street in the rear of the building. It has been the wish of the School Committee to have an additional high school building occupy the whole of this lot, one end of which should be occupied by a manual training plant. If the city council will not give the large building the next best thing, on the ground that a half loaf is better than no bread, is a small building for manual training, so constructed as to form one end of the larger building which the future must provide. This should have been given two years ago, and is still the pressing need. In the lack of it the Committee has been forced to rent the old Moody school house, and to fit up the same at large expense. Of course the machinery and equipment is all of a kind which can be moved, and which will be appropriate for a permanent plant, but the large sums spent on repairs of the old building are all dead loss. And further sums to be spent in the same way will be further loss, a fact greatly to be regretted, but which cannot be helped if we are to continue to occupy a rented building.

Except for its distance from the high school the old Moody school house affords very good quarters, and it has been fitted up in a way to give the students a very comfortable and satisfactory home. Two of the old school rooms have been thrown into one on each floor. In the one up stairs are twenty-four benches for carpentry, and in the one on the first floor are twelve lathes for wood turning and one machine lathe for iron working, while the basement has been fitted up for foundry practice. Of the old school rooms which have

been left unchanged one is used for drawing and one for academic recitations. Forging should be added next year, and for this purpose a cheap, temporary building, or shed, should be erected in the yard.

The number of new students to elect the manual training course this year was disappointingly small, a fact largely due, no doubt, to the use of a building so far away from the rest of the high school. The junior class numbers 24, but only fourteen of these are in the first year in academic work, the other ten, of whom six are girls, being from second and third year pupils. The advanced class numbers seventeen. All the classes are in excellent condition, and are doing, as might be expected with the better equipment, far better work than ever before.

The afternoons not being occupied with high school students, large petitions were received from pupils of ninth grammar grades asking for instruction in the hours not otherwise used, and in response Mr. Carothers and Mr. Harris have both generously given their services for such classes one afternoon in the week. The classes thus provided for each number 24, and would be increased four or five fold at once if it were possible to accommodate all who wish to attend. Thus far, indeed, manual training has been much more popular with scholars of the grammar schools than of the high school, and I wish that it were possible to do some work of this kind, more than we are now doing, in every grade of the public schools.

MEDICAL INSPECTION.

I am very glad indeed to learn that the Board of Health, in their report this year, will strongly recommend medical inspection of the schools. The plan is, as I understand, to couple this duty with that performed by the ward physicians, who already receive \$300 annually. This is the same sum paid to the inspectors in New York, and is \$100 more than is paid in Boston. Interest in the sub-

ject elsewhere is steadily increasing. New York and Chicago have been added to the list of cities doing systematic work of this kind, and the results in both have been such as to fully justify, and more than justify, their action. The proposal of our own Board of Health, is, therefore, in the line of the best thought and action on the subject, and it is greatly to be hoped that their recommendation will be adopted. Last year I asked the School Committee to employ some one to do this work, and I still think the plan I outlined in the report for 1896 is about as near ideal for Lowell as any I have seen, but the important thing is not who shall do the work, but that the work be done, and I therefore welcome action by the Board of Health.

Tests for physical defects, especially those of vision, have been made by several enterprising teachers, and by two physicians. Miss Katherine Law, a student of the training school, tested the vision of 300 children, and found 45% to be defective. An excellent account of her work may be found in Educational Foundations for October, 1897. Dr. Bell tested the eyesight of 524 pupils of the Highland school, and found 165 defective. No treatment was recommended for those who had five-sixths of normal vision, of whom there were eight, nor for those having two-thirds vision who were not troubled by headache or other ills obviously due to the condition of their eyes, of whom there were twenty, reducing the number of those for whom treatment was recommended to 137, or 26% of the whole number examined. Eighteen were aware of their condition, and had already received treatment, leaving 119, or more than 22% whose need of treatment, whether previously known or not, was still immediate and pressing. Dr. Stephenson tested the sight of 2081 children of grammar and upper primary grades, and found 44% defective, of whom about 27% needed treatment, a result agreeing closely with those of Miss Law and Dr. Bell.

To the foregoing figures no words can add emphasis. They mean that there are today two thousand children in the public

schools whose eyes are in need of treatment, and certainly the discovery of these cases, and the giving to parents such information as shall put them in the way of cure, or of relief through the use of glasses, is a work of the first importance.

In case of defect a notice is sent to the parent by the teacher, stating simply that a test has shown that the child's ability to see is so much below the average as to make it desirable that an oculist shall be consulted. For the further guidance of parents too poor to pay doctor's bills a list of the five free clinics for eyes which are connected with the various hospitals of the city is added. Free treatment is, therefore, within the reach of all who need it, and glasses for those who require them should, I think, be provided by the city, though this has not yet been done.

EVENING SCHOOLS.

The evening schools of the city consist, as last year, of one high and twelve elementary. They differ in quality, as do all schools, but the most of them are in excellent condition, and many students in them are doing just as earnest work, and making, relatively, just as much progress as is made by the students of any school in the country. Citizens who have any doubt as to their value are respectfully invited to visit them and see for themselves.

The attendance is less this year than last, and has been steadily decreasing for several years, a fact which is, I believe, to the credit of the schools rather than the reverse. The influx of foreigners unable to read and write in English has been much less of late than in years of greater manufacturing prosperity, and those of this class who have been in the city two or three years have nearly all learned enough so that attendance on an evening school is no longer compulsory. In the Bartlett school district, which once had a school of four hundred pupils, the principal is of the opinion that there will not be at the end of this season forty who cannot read and write

in English. Of the many Greeks who have composed the Mann school the adults have either learned to read or have given it up as a bad job, and the few newly arrived minors are all who remain for whom attendance is compulsory. The work of the schools with illiterates, therefore, has largely been done, and well done, and attendance naturally falls off. The high school and the classes in the elementary schools which are fitting for the high school are, however, better attended than ever before.

The present need is, I think, for an intermediate school. The principal of the high school estimates that three hundred applicants were refused admission last October for lack of qualifications. They were advised to go to an elementary school one term to prepare themselves for the high next year, but only a very few of them did so. To go to a school composed, in part at least, of illiterates doubtless seemed to them a humiliation. In parenthesis, I should like to say that this was a mistake on their part, that every elementary school really has classes exactly adapted to their needs, separate from the other classes, places where self-respecting young men and young women can go with comfort and credit, yet their lack of information as to these classes, and their unwillingness to go to an elementary school to find them, was not, perhaps, unnatural. To an intermediate school, however, I have no doubt that such applicants would flock in large numbers. In it should be placed the classes in penmanship, elementary arithmetic and elementary grammar, now in the high school. The standard of the high school would thus be raised, as it ought to be, and an intermediate school would have at once, I believe, an attendance of four or five hundred, the majority of whom are not provided for, or at least do not now go, elsewhere. The lack of a building in which to place such a school is the only reason why I do not beg for one next year,—another of the many reasons why we should have at once a new high school building on John Street.

Summary of Attendance.

FOR THE TERM 1896-97.

SCHOOLS.	Number of Teachers at Opening of Term.		Whole number on Time Books.			Average number belonging.			Average Attendance.			Per Cent. of Attendance.
	Number of Teachers at Close of Term.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	
High	20	18	544	349	893	318	168	486	248	175	423	87
Aiken Ave.....	8	7	66	63	129	41	40	81	47	41	88	62
Bartlett.....	17	16	....	303	303	....	256	256	...	239	239	90
Butler.....	7	4	138	20	158	70	10	80	54	8	62	78
Colburn	12	10	115	40	155	99	24	123	80	24	104	83
Edson.....	9	8	135	54	189	67	43	110	52	48	100	91
Franklin	12	8	134	90	224	84	61	145	76	50	126	87
Green	25	22	642	....	642	219	....	291	277	....	277	95
High St.....	7	5	67	58	125	30	40	70	20	30	50	79
Hebrew.....	3	1	81	....	81	30	....	30	22	....	22	74
Mann.	26	18	399	....	399	228	....	228	214	....	214	90
Pawtucket.....	3	1	22	11	33	11	7	18	9	6	15	84
Varnum.....	8	7	132	79	211	62	56	118	54	49	103	90
Middlesex Vill..	1	....	....	....	....	....	....	....	....	....	....	...
Totals.	158	125	475	1067	3542	1331	705	2036	1153	670	1823	84

GRADUATES, CLASS OF 1897.

REGULAR THREE YEARS' COURSE.

Ella V. Brennard.	Queenie M. Brinnigion.
William P. Burke.	Henry P. Farley.
Frank J. Cox.	James W. Gregg.
Minnie F. Donohue.	William Goldrick.
James W. Hamilton.	John J. Inglis.
Francis L. Kelley.	John H. Keegan.
Katherine L. Kneafsey.	Marguerite A. Kenney.
Michael C. Killeen.	Beatrice Lefevre.
Elizabeth A. Lynch.	John J. Mealey.
Patrick C. Murray.	James Moynihan.
Francis E. McGuire.	Jennie M. McCort.
Jennie V. Manchester.	Mary Etta M. Madigan.
Nellie A. Monahan.	William Pearsall.
Mary A. Scanlan.	Georgia Riley.
Mary E. Sharkey.	Henry M. Thompson.

CHEMISTRY.

THREE YEARS' COURSE.

John J. Gallagher.	Francis T. Quinn.
Harris R. Livingston.	James A. Renwick.
Joseph A. Mehan.	Jeremiah D. Sullivan.
	Joseph Waterhouse.

STENOGRAPHY AND TYPEWRITING.

TWO YEARS' COURSE.

May M. Archibald.	Anna L. Estabrook.
Sallie A. Burgess.	Hattie M. Fowler.
Mattie S. Brown.	Miles Mawn.
Allison W. Clark.	Georgia T. Story.

EVENING DRAWING SCHOOL.

The evening drawing school was first opened in 1872, and its twenty-fifth anniversary was recognized this year by a well written historical sketch, which was printed in all the newspapers of the city and read, I hope, by every citizen. Certainly the record was one in which the school and the city can take a just pride. It now has an eight-room building set apart for its exclusive use, and its equipment

is thorough and complete. It has departments in modeling and designing as well as in free hand, architectural and machine drawing, and interest in it is constantly increasing. In the past it has furnished the instruction and the impetus to further study which has enabled its pupils to fill with credit important positions as teachers, draughtsmen, architects and designers, and in the present it is working more successfully than ever, as we believe, to the same end.

Following is the record of attendance for the term of 1896-97 :

CLASS.	Number of Teachers.	Whole number on Time Book.			Average number belonging.			Average Attendance.			Per Cent. of Attendance.
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	
Architectural.....	4	71	5	76	50	1	51	34	1	35	70
Free-hand.....	5	87	87	174	52	61	113	42	38	80	71
Machine Drawing ...	5	122	1	123	83	1	84	64	1	65	76
Modeling.....	4	46	55	101	38	20	58	32	18	50	87
Practical Design.....	2	3	17	20	3	14	17	3	11	14	82
Totals.....	20	329	165	494	226	97	323	175	69	244	77

TEXTILE SCHOOL.

The Textile School in our city is not, of course, a part of the public school system, and there would be no propriety in speaking of it in this report were it not for the fact that our schools will naturally be expected to fit pupils for it. The school is still new, but it already has the finest equipment of any similar institution in the world, and almost as many pupils as it can accommodate. Its object is one with which every citizen is in sympathy; the pupils from our public schools will, we hope, form a large proportion of its students, and it is manifestly our duty to prepare them for it just

as we now prepare for Harvard, Technology, or the Normal School. For this as for any other school the ground work of a common school education is undoubtedly the first essential, and if high school and college can be added so much the better. A few things, however, are evidently specially needed, as, for instance, some knowledge of algebra and geometry to make the formulae of mechanics comprehensible, some chemistry as a foundation for work in dyeing, some knowledge of drawing for the duties of every day in every department, and especially the training of eye and hand to be obtained in our manual training school. So important is this last feature that the director tells me that he is seriously considering whether it will not be possible to shorten the course for those students who have previously had manual training. At present, therefore, in the absence of a course planned especially for the Textile School, it may fairly be said that the best road to it lies through our manual training course, a fact which is commended to the attention of all students and parents who are thinking of a course in the Textile School for themselves or their sons.

STATE NORMAL SCHOOL.

The State Normal School for which Lowell's representatives worked so hard three years ago, and from which we have all expected so much, is at last an established fact. The building is not finished, it is true, but a part of it was sufficiently advanced to be occupied last October, and no less than 109 juniors answered to the school's first roll call, while the total attendance is increased by the presence of thirty to thirty-five post graduates or students in special courses. Only one school in the state, Bridgewater, has a larger junior class, and the three other new schools have together received this year but 126. Certainly the claim of the city's representatives before the legislature three years ago that Lowell was a good place to provide, attract, and accommodate students has been justified.

Our hope, too, that the new school would come at once into

close touch with the system of public schools of the city ; that its teachers would all be citizens of Lowell as well as instructors in a state institution ; that they would take an active interest in our schools as well as in their own ; and that by their wisdom and advice superintendent, committee and teachers might all be helped, has found its first fruition in the appointment of two of our own teachers to positions in the state school, and in the readiness of all the others to enter at once into the social and school life of the city. From the normal school we expect nothing less than a great uplift of educational knowledge and zeal throughout the whole city, and happily the ability and character of the teachers thus far appointed justifies our expectations.

At a meeting of the School Committee held June 28, the Committee on Teachers was given full power to arrange with the State Board of Education for the practice school to be provided by the city. This committee had a conference with a representative of the State Sept. 14, and the following agreement was made, thus fulfilling in a manner satisfactory to both contracting parties all the claims of either upon the other :

**AGREEMENT FOR THE CONDUCT OF SCHOOLS OF OBSERVATION AND PRACTICE IN CONNECTION WITH THE STATE NORMAL SCHOOL,
LOWELL, MASS.**

In accordance with section 5, chapter 457, Acts of 1894, whereby the City of Lowell, Mass., agreed in writing "to hereafter furnish suitable and sufficient school buildings and model and practice schools in connection with the training departments of the State Normal School to be established at Lowell," this agreement is made and entered into this fourteenth day of September, in the year one thousand eight hundred and ninety-seven, by and between the City of Lowell, in the County of Middlesex, and Commonwealth of Massachusetts, acting through the president of the School Committee of said Lowell, thereto duly authorized, parties of the first part, and the State Board of Education, acting for and in behalf of the Commonwealth of Massachusetts, as the party of the second part, to establish and maintain Schools of Observation and Practice upon the following terms :

SECTION I. The City of Lowell agrees :

1. To the use of the Bartlett School by the Normal School as

a School of Observation and Practice, and the use of such other schools as may be needed for additional practice schools.

2. To furnish, heat, clean and repair the buildings, and care for the grounds.

3. To provide principals and assistant teachers not exceeding in number the number of rooms, and to maintain the schools upon the same basis as other similar schools.

4. All and each of the above provisions shall be satisfactory to the Board of Education of the Commonwealth of Massachusetts.

SECTION II. The Commonwealth of Massachussets agrees :

1. To use the Bartlett School as a School of Observation and Practice, and such other schools as may be used for practice schools, in such a manner as to equal at the least the general educational requirements of the School Committee of the City of Lowell.

2. To pay to the principals and assistant teachers of the said schools, in addition to the amount paid by the City of Lowell, such salaries as shall be necessary to provide teachers qualified for the peculiar work of the said schools.

3. To expend for text-books, supplies, and apparatus, in addition to the money expended by the City of Lowell for the said purpose, such sums of money as shall be necessary for the proper conduct of the said schools as schools of observation and practice, such material to be marked "Property of the State Normal School, Lowell, Mass."

4. All and each of the above named provisions shall be with the approval of the School Committee of the City of Lowell.

SECTION III. It is further mutually agreed by the City of Lowell and the Commonwealth of Massachusetts :

1. That all teachers of the School of Observation and Practice shall be nominated by the principal of the Normal School, their election, as for all teachers, being by the School Committee.

2. The janitors of the Bartlett School shall be nominated by the principal of the Normal School, and elected by the School Committee.

3. That all courses of study, text-books, and changes therein shall be approved by the principal of the Normal School and the School Committee of the said city before going into effect.

4. That all matters of promotion, discipline, attendance, and truancy shall be under the care of the School Committee of the said city.

5. It is finally mutually agreed by the City of Lowell, Mass., and the Commonwealth of Massachusetts, that this agreement shall be subject to such modifications as shall be agreed upon hereafter by the said City and Commonwealth.

CO-OPERATION OF TEACHERS.

The School Committee have chosen, in the report which precedes my own, to express the opinion that the best good of the schools requires a closer and more effective co-operation between the teachers and the superintendent. In self defense I wish to assert that I have not only welcomed but have earnestly sought for such co-operation from the first. For the teachers, too, it is only just to say that as a whole they have been loyal and kind to me to an exceptional degree. I have, indeed, been treated with a generosity so great as to deserve and win my hearty gratitude, and I hope I may never say a word which, even by inference, may seem to suggest a different feeling.

The Committee's reference to the school system of Indianapolis, however, leads me to suppose (for I have not discussed the subject with any member) that the matter in mind was not one of regard or support, but rather of general policy and plan of working. In Indianapolis the head teachers,—grammar masters we call them here, supervisors they are called there, form with the superintendent a board of directors for the consideration of everything which pertains to the welfare of the schools. The plan assumes that all teachers of the city, but especially those whose duties are in part supervisory, will be glad to throw into a common fund any facts, ideas or opinions they may have which will benefit the schools, and that the superintendent will be equally glad to get such information and to be guided by it. Ten men are obviously wiser than one; their opinions would have proportionally greater weight, and the zeal of teachers in carrying out plans which they had themselves suggested would naturally be greater than would otherwise be the case. With this general plan, therefore, I heartily agree; indeed I believe it to be the one thing most needed for the improvement of our schools, and any plan of the Committee to exalt the grammar masters by giving to them more power, influence and responsibility will meet with my most hearty approval.

The following letter, a sample of many, will show what has been the policy of the past:

OFFICE OF THE SUPERINTENDENT OF SCHOOLS,

APRIL 26, 1897.

To Teachers of Lowell Public Schools:—

By the Rules of the School Committee changes in the course of study or in text-books cannot be made during a school year, and such changes, to apply next year, must be made soon if made at all. I therefore respectfully ask you all, but especially masters and principals, to report to me soon any changes which would, in your opinion, tend to benefit and improve your schools. These matters affect you and the pupils in whose interests you are employed far more vitally than anyone else, and if you can suggest anything which will be for your and their advantage it seems to me that it is both your privilege and your duty to do so. Suggestions on which you, or any part of you, can unite will, of course, have more weight with the Committee than those from individuals, but if united action is impossible I, at least, promise sympathetic consideration of all suggestions whether made by many or by one.

Very truly yours,

A. K. WHITCOMB.

The suggestions thus asked for in two particulars have been extended, in other invitations, to include all matters affecting the welfare of the schools; they are still desired, and any plans of the Committee for securing the more effective co-operation referred to will receive from me a hearty welcome.

Respectfully submitted,

A. K. WHITCOMB,

Superintendent of Schools.

REPORT OF THE TRUANT COMMISSIONERS FOR THE YEAR 1897.

		Absentees.		Truants.		Working without certificate.		Wandering about the streets.		New scholars.		Juvenile offenders.		Violating the rules of school.		Total number cases investigated.		Arrested.		Sent to the Middlesex County Truant School.		Placed on Probation.		Visited second time.		Visited third time.		Working certificates issued—(if to 16 years of age.)		Working certificates approved—(if to 15 years of age.)	
January.....	93	7	0	0	1	0	3	0	103	3	0	0	0	0	0	0	15	5	35	5	2	25	6	6	5	5	35	5	6		
February.....	114	9	0	0	1	2	0	0	127	0	0	0	0	0	0	0	0	8	2	25	2	2	25	9	9	9	9	37	2	9	
March.....	170	33	0	0	7	0	4	1	214	1	1	1	0	0	0	0	0	15	11	37	11	3	45	12	12	37	3	3	45	12	
April.....	110	20	0	0	6	2	1	0	139	0	0	0	0	0	0	0	0	8	3	8	3	3	3	12	12	12	12	87	3	12	
May.....	235	60	0	0	5	0	3	0	303	5	5	5	0	0	0	0	0	20	12	87	12	12	87	15	15	87	15	15	87	15	
June.....	82	18	0	0	0	0	0	0	100	2	2	2	0	0	0	0	0	15	4	120	4	4	120	10	10	10	10	10	10	10	
July.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
August.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
September.....	27	14	0	0	1	0	1	0	43	1	1	1	0	0	0	0	0	1	1	3	1	1	3	1	1	3	1	1	3	1	
October.....	175	27	0	0	2	1	2	0	207	7	7	7	0	0	0	0	0	1	1	20	1	1	20	12	12	12	12	80	12	12	
November.....	142	22	0	0	4	2	3	0	173	1	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	
December.....	91	37	0	0	5	0	4	0	137	1	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	
Totals.....	1239	247	0	31	6	23	0	1646	21	0	20	1	119	62	681	111															

Whole Number of Contagious Diseases Reported by the Board of Health.

SCARLET FEVER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
DIPHTHERIA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
MEASLES	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
MEMBRANOUS GROUP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
TOTAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
				</																										

Courses of Study.

TIME TABLE

In minutes, per week, for the

PRIMARY AND GRAMMAR SCHOOLS.

	1st Year.	2d Year.	3d Year.	4th Year.	5th Year.	6th Year.	7th Year.	8th Year.	9th Year.
Reading.....	670	580	540	300	220	180	160	150	150
Arithmetic.....	150	210	240	250	280	280	280	280	270
Grammar.....	....	....	....	....	....	120	130	150	200
Comp. and Lang.....	75	75	75	150	150	100	100	100	100
Geography.....	30	30	40	180	180	180	170	150	150
History.....	....	....	....	40	60	60	140	150	150
Spelling.....	60	90	90	100	100	100	100	100	90
Writing.....	60	60	60	60	60	60	60	60	60
Drawing.....	60	60	60	60	60	60	60	60	60
Music.....	60	60	60	60	60	60	60	60	60
Nature Study.....	30	30	30	60	60	30	30	30	30
Physiology.....	25	25	25	...	30	30	30	30	....
Sewing.....	....	....	....	60	60	60	....	....	....
*Manners, Morals	25	25	25	25	25	25	25	25	25
Physical Culture.....	30	30	30	30	30	30	30	30	30
†Recesses.....	200	200	200	100	100	100	100	100	100
†Opening Exercises.....	25	25	25	25	25	25	25	25	25
Totals.....	1500	1500	1500	1500	1500	1500	1500	1500	1500

*Required by State Law; time fixed at five minutes each day by vote of the School Committee.

†See Sec. 22, Chap. III, of the Rules of the School Committee.

‡See Sec. 23, Chap. III, of the Rules. If for any reason a recess is shortened or omitted the time for the same should be given to physical exercises, and the hours for closing schools prescribed by the School Committee should not be changed.

Book-keeping may receive one-half the time assigned to penmanship in the ninth year, and algebra should have all the time allotted to geography in the last half of the ninth year.

Physics, optional, in the ninth year, may occupy 90 minutes per week, to be taken equally from physical culture, arithmetic and grammar.

The above table is intended as an approximate estimate of the relative importance of the different studies, and teachers are at liberty to vary the time for each study within such reasonable limits as circumstances may require.

FIRST YEAR.

FIRST HALF.

READING.—Teach by the sentence and word method, beginning with script letters on the blackboard, and later using the Monroe or Appleton Chart and the first lessons in the First Reader. Employ phonic analysis to secure distinct articulation and assist in the recognition of new words. Consult on the subject of phonics Mrs. Pollard's "Manual of Synthetic Reading," Ward's "Manual of Instruction for the Rational Method in Reading," and the Connecticut school document entitled "Phonetics in Teaching Reading." Secure naturalness of expression by making sure that no sentence is spoken until the thought is fully comprehended. Consult Miss Spear's "Preparing to Read," Dr. Garmo's "Language Lessons, Part I," and Miss Badlam's "Suggestive Lessons in Language and Reading."

WRITING.—Words and letters from blackboard copy.

SPELLING.—Words of the reading lessons copied from the blackboard. After the letters of the alphabet are known, spelling from dictation may be begun, at the option of the teacher.

LANGUAGE.—Object: (1) To secure the confidence of the children and make them feel at home in school; (2) to increase their vocabulary; and (3) to accustom them to express their thoughts in simple and correct forms of speech.

Lead the children to talk freely about things with which they are familiar, and to reproduce short stories told them by the teacher. Require complete statements, correct forms of speech, and distinct articulation, using great care, however, that corrections are not made in a way to repel confidence or lessen interest. The importance of making children enjoy the first weeks of school life cannot be overestimated. Memory gems, brief maxims, and short selections of poetry, learned and recited in this and all

succeeding grades. History and literature in the form of short stories told by the teacher and reproduced orally by the children should have some place from the first, care being taken to have such stories very simple as well as short. Consult Miss McMurray's "Classic Stories for Little Ones," Lang's "Fairy Tales," and Miss Wiggin's "The Story Hour."

ARITHMETIC.—Numbers from one to five, inclusive. Add, multiply, subtract, and divide, developing all processes by the aid of objects. Consult Wentworth and Reed's "First Steps in Number," Baldwin's "Industrial Arithmetic," and Speer's "Primary Arithmetic" in this and succeeding grades.

GEOGRAPHY.—Conversation lessons, preparatory to regular work in geography. Teach position, as above, below, on, under, front, back, etc., and right and left as relative terms. Lead children to observe the temperature as warm, hot, or cold, and the weather as sunny, cloudy, or rainy. Consult Frye's "Primary Geography," and Maltby's "Map Modelling in Geography and History" in this and all succeeding grades of the primary schools.

NATURE STUDY.—Lessons to recognize and name a few common plants, animals and minerals, and to note single qualities of each. Teach only from observation and experiment. The "Outline Course" prepared by the N. E. Conference of Educational Workers will be supplied to each school, and may be used as a manual. Consult also Miss Newell's "Lessons in Botany." Cooke's "Nature Myths" and Lovejoy's "Nature in Verse" are recommended for reading in this and succeeding grades.

PHYSIOLOGY.—Oral lessons, teaching the names and uses of the external parts of the body, and the simplest rules of health. Consult Prince's "Courses and Methods," pages 173 and 195. The order of topics prepared by Dr. Dunton of the Boston Normal School, and printed on page 196 of the above mentioned book,

may profitably be followed in this and all succeeding grades. Teach the effect of the use of alcoholic stimulants and narcotics as required by the laws of the State.

MANNERS AND MORALS.—As required by the Public Statutes of the Commonwealth and printed on page 30 of the Rules of the School Committee, in this and all succeeding grades. Mrs. Dewey's "How to Teach Manners," or Miss Wiggin's "Lessons on Manners," may serve as a manual.

MUSIC AND DRAWING.—Throughout the course as directed by the special teacher of each of those branches.

SECOND HALF.

READING.—Franklin First Reader and supplementary readers. Continue phonics, and teach the long and short sounds of the vowels. See that every phrase is spoken as a whole. In this, as in all grades, the aim is to secure a full comprehension of the thought, natural expression, distinct articulation, correct pronunciation, and ready utterance.

If the last part of the First Reader proves too difficult for the first year, leave a part to be finished the second year.

WRITING.—Words and sentences from the blackboard, chart, and slips prepared for the purpose. If all the letters of the alphabet have not been learned by the pupil by the end of the year, unconsciously, give a little special instruction to accomplish this object.

SPELLING.—Words of the reading lesson copied from the blackboard, and afterwards spelled, orally or in writing, from dictation. Teach children to spell their own names, and the names of places or objects in which they are interested.

LANGUAGE—Objects: to increase the pupils' stock of ideas and words, and to facilitate the expression of thought in correct forms of speech.

Conversational lessons as in the first half, carefully correcting all errors of expression. In this respect every lesson in this and all succeeding grades should be a language lesson. History and literature continued. Begin writing short sentences, and teach the capital at the beginning of the sentence, the capital I, and the period and interrogation mark.

ARITHMETIC.—Numbers, oral and written, to ten, inclusive. Use objects, but discard them gradually as facts are learned, and give much drill in applied and abstract work. Arabic and Roman notation to ten (and further, so as to enable pupil to tell page, lesson and paragraph in the reading book, at the option of the teacher. Teach and use the signs $+$, $-$, \times , \div , $=$, and have their use begun by pupils. Teach, objectively, the fractions $\frac{1}{2}$, $\frac{1}{4}$; coins from one cent to ten cents; pint, quart, inch.

GEOGRAPHY.—Teach cardinal points with practical application to objects in the school room, the school yard, and streets near the school house, and give easy oral lessons at appropriate times on natural objects and phenomena, as sun, clouds, rain, snow, etc.

NATURE STUDY.—Lessons as in the first half. Teach only the most general and obvious features, and assist pupils to find out all facts for themselves as far as possible. Whenever practicable, provide specimens for all the pupils. Encourage the children to make collections.

PHYSIOLOGY.—As in the first half. In connection with the names and uses, teach the proper care of the hair, teeth, nails, etc. Do not try to teach too much; only general facts which are mainly within the range of the pupils' observation are wanted. Show importance of cleanliness, exercise, proper clothing, good food, pure air, etc., in this and succeeding grades.

SECOND YEAR.

FIRST HALF.

READING.—The first half of the Franklin Second Reader, and supplementary readers. The fault to be most carefully avoided in this and all succeeding grades of the primary course is haggling over words. To prevent this all new and difficult words should be pronounced and their meaning explained before oral reading is begun. Then, by questioning, make sure that the pupil fully understands every sentence before he reads it. Make haste slowly, and give pupils much easy reading, rather than a little which is difficult.

WRITING.—Words and sentences as in the first year, and from dictation. Use capitals, the period and the question mark.

SPELLING.—Words of the reading lesson written on black-board by teacher, copied by pupils, and afterwards written from dictation or spelled orally, or both. Teach also the spelling of some proper nouns, as days of the week, etc.

LANGUAGE.—Object : To stimulate thought, to cultivate the powers of observation and imagination, and to develop facility in the use of good English.

Oral and written exercises. Use for material such objects and topics as will furnish the best opportunity for the expression of thought, and make sure that the pupil always has the thought clearly in mind before he is required, or even allowed, to say or write anything. Train observation by noting qualities and uses of objects, and the imagination by stories suggested by pictures. In connection with sentences written from dictation, teach capitals and a few common abbreviations.

Literature for this year may properly include such stories from Anderson as "The Flax," "The Snow Man," "The Ugly Duckling," and extracts from Longfellow's "Hiawatha." For history the story

of Columbus, the Pilgrims, Washington, etc., would be appropriate. Suit history to holidays as "The First Thanksgiving," to November, etc.

ARITHMETIC.—Numbers, oral and written, in separations and combinations, to twenty. Objects may be used if necessary, but ought not to be greatly needed. Continue drill in applied and abstract work. Simple operations in small fractions and in denominate numbers also continued. Teach pupils to read the signs +, —, etc., and to use them as well as know their meaning. Form and read tables to the limit of known numbers in this and all succeeding grades.

GEOGRAPHY.—Continue drill in cardinal directions, applying the terms north, south, etc., to all objects near enough to the school-house to be within range of the child's observation or knowledge. Apply same to direction of wind. Continue study of objects within vision, as cloud, dew, ice, fog, etc.

NATURE STUDY.—Work of the first year continued and extended. Of plants name parts, as stem, leaf, bud, etc. Name parts and note habits of animals, birds, insects, etc. Remember that no lesson is worth giving which does not thoroughly interest the pupil at the time, and tend to increase his regard for the natural objects which are all about him. Have pupils draw and describe, orally and in writing. In this year read Wood's "First Natural History Reader," and Wright's "Seaside and Wayside, No. 1."

PHYSIOLOGY.—The senses: the eye and sight; the ear and hearing. Teach only the most general features, any thorough study of the anatomy of the eye or ear being wholly out of place. Teach by observation and experiment as far as possible. Temperance teaching as before.

SECOND HALF.

READING.—Franklin Second Reader completed. Phonic drill continued. If pupils cannot easily complete the Second Reader, omit the last part, and substitute easy reading from supplementary readers.

WRITING.—On paper, from blackboard copy, from dictation, and from print as found in the reading book.

SPELLING.—As in the first half. Have words used in sentences. Teach the spelling of terms used in other studies, and of objects like articles of food or clothing with which children are familiar.

LANGUAGE.—Object: as in the first half. Oral and written exercises. Continue the reproduction and picture stories, and simple descriptions of objects, scenes and actions. Have the pupils construct sentences, using words taken from the reading lessons, or suggested by the teacher. Continue to give attention to capitals and the most common marks of punctuation, and teach the simplest form of letter-writing. History and literature as in the first half.

ARITHMETIC.—Numbers, oral and written, to fifty, with drill as in the first half. Give much practice in oral examples, with abstract numbers involving several operations, for rapid work. Roman notation to fifty. Coins and dollar sign; pint, quart, gallon; pint, quart, peck, bushel; inch, foot, yard; hour, day, week, month, year; dozen. Fractions, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{3}$, $\frac{1}{6}$.

GEOGRAPHY.—Continue work of first half, and begin the work of recognizing and naming bodies of land and water which are within the range of the pupils' observation, as hill, valley, river, brook, etc. Field lessons are strongly recommended. With growing plants in the school-room, teach effects of too great heat or cold, lack of moisture, etc.

NATURE STUDY.—As in the first half. Continue collections. Experiment with seeds planted in pots in the school room. Have children gather cocoons, and watch for the change into moths and butterflies. Make regard for animal life an integral part of all lessons on animals. Observe, draw, describe.

PHYSIOLOGY.—The senses continued ; the nose and smell ; the tongue and taste ; touch. Show the use and value of all the senses, and the ill effects of abuse, including under the latter topic the effects of alcohol and tobacco. Be careful not to lessen influence by over-statements.

THIRD YEAR.

FIRST HALF.

READING.—The first half of the Franklin Advanced Second Reader, and supplementary readers. The habit of reproducing that which has been read, usually orally, but sometimes in writing, which should have already been begun, becomes in this and succeeding grades a matter of the greatest importance, and every reading lesson should have in connection with it some work of this kind.

WRITING.—On paper with pen or pencil, and in the writing book with pen. Give special attention to correct pen holding. In all written work in language, nature study, etc., insist on order, neatness, and the very best penmanship of which the pupil is capable.

SPELLING.—Words and sentences copied from the reading book, and afterwards written from dictation. New words in the reading lessons spelled orally, and afterwards written in sentences. Be sure that no pupil is called upon to spell a word the meaning of which is not known. Insist upon correct spelling in all written work. Give much drill on familiar words which are often misspelled, but do not consider it necessary to teach the spelling of all the difficult and uncommon words which are found in the reading book.

LANGUAGE—Oral and written exercises. Review, continue, and extend all work of previous grades. Teach different forms of sentences, the use of is, are; was, were; did, done; saw, seen, etc.; the correct use in sentences of some synonyms, as big, large; like, love, etc.; and a few homonyms, as fore, four; write, right; no, know, etc.; the use of capitals with proper names, some abbreviations and such punctuation as is needed in the written work done by the pupils.

The work in history and literature may be extended somewhat, both in use and in subjects. A little written reproduction may be added to the oral, and stories for literary culture may include myths, fables and folk lore such as are given by Hawthorne in his "Wonder Book," or Scudder in his collection of folk lore tales. In myths, choose those of natural objects as "Ulysses and the Bag of Winds," etc. History may include more stories of noted men and events. The history of Lowell is worthy of much attention, especially the story of its founding. Note use of Indian names as Wamesit, Merrimack, Pawtucket, etc.

ARITHMETIC.—Numbers, oral and written, Arabic and Roman notation, to one hundred. Drill as before on rapid, applied, and abstract work, and give considerable attention to adding numbers in columns, and to the multiplication table, the latter being, of course, developed before it is memorized. Review and extend all previous work, especially that in fractions and denominate numbers. To fractions previously studied add twelfths.

GEOGRAPHY.—Teach as many land and water surfaces as can be brought within the range of observation (names, not definitions), and, by the aid of pictures, begin to develop some knowledge of objects beyond vision. Field lessons and sand modeling, if possible. Consult Frye's "Primary Geography," "Brooks and Brook Basins," and "Child in Nature."

NATURE STUDY.—Observation lessons on familiar plants, animals, and minerals continued, to include some knowledge of parts, habits, uses, qualities, etc., with comparisons noting resemblances and differences. In the study of minerals consult Crosby's "Common Minerals and Rocks" and Richards' "First Lessons in Minerals." Read in this year, "Wood's Second Natural History Reader" and "Seaside and Wayside, No. 2." Consult Ricks' "Natural History Lessons."

PHYSIOLOGY.—The bones, teeth, skin and muscles. Teach few names, and only the most general features, giving special attention to the laws of health. Temperance teaching continued. Throughout this year some exercises may well be written, and the interest may be increased by drawing some of the parts described.

SECOND HALF.

READING.—Franklin Advanced Second Reader completed, and supplementary readers. Continue phonics and enunciation exercises, and teach syllables, accent, and the use of diacritical marks.

"The best way to teach children to read, after they are once started, is to put into their hands a good story book."—*Swett.*

WRITING.—Copy book No. 2, with pen, and paper with pen or pencil, as before.

SPELLING.—As in the first half.

LANGUAGE.—Results to be accomplished: At the end of this year pupils should be able to reproduce the thoughts of others, whether read silently by themselves or told them by the teacher, and to express their own thoughts on any subject clearly within the limits of their own knowledge, with considerable facility and in correct and appropriate forms of speech. They should have some knowledge of the simplest form of letter-writing, and should

know the usual marks of punctuation, the common abbreviations, and the proper use of capital letters.

The work to be done is best indicated by the above statement. Consult Tarbell's "Lessons in Language," of which Part I will be the work for pupils in the first half of the fourth year.

ARITHMETIC.—Numbers to one hundred and forty-four. Arabic and Roman notation to one thousand. Review and extend the work of all previous grades. To be ready for promotion to a grammar school, children should be able to add columns of figures to a total of 100 rapidly and accurately; to know the multiplication table to twelve times twelve; to use all the common tables of denominate numbers in simple reductions; to find fractional parts of all numbers less than 144 which are multiples of fractions to and including twelfths; and to add, subtract, multiply, and divide small fractions, like $\frac{1}{2}$, $\frac{1}{4}$, and $\frac{1}{8}$.

GEOGRAPHY.—Continue work of first half and review and extend work of all previous grades. Teach by observation as far as possible, and then, by the use of pictures, as many bodies of land and water as is possible. Observe, draw, model, and describe.

NATURE STUDY.—Lessons as in the first half.

PHYSIOLOGY.—Circulation, respiration and digestion. As before, avoid teaching too much, and make the instruction as practical as possible, by relating each fact learned to some simple and easily followed law of health.

GRAMMAR SCHOOLS.

FOURTH YEAR.

READING.—Franklin Third Reader and supplementary reading of the same grade.

SPELLING.—Words in common use, orally and in writing. By definition, or use in sentences, make sure that pupils understand the

meaning of all words given for a lesson. Make every written exercise a lesson in spelling. Select words for practice from all text books used, and for supplementary drill use Worcester's New Pronouncing Speller : First half to page 29; Second half to page 47.

ARITHMETIC.—Numbers to 1000. Daily oral drill in numbers to 100, as in the primary schools. Written work, with numbers expressed by not more than three figures, in addition, subtraction, multiplication and division, no multiplier or divisor to be larger than 9. Use terms, sum, product, multiplier, etc., but do not require definitions. Give problems in dollars and cents, using the dollar sign and decimal point. Continue the drill of the primary school in easy reductions of denominate numbers. Teach thoroughly the reduction, addition, subtraction, multiplication and division of the fractions, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{3}$, $\frac{1}{6}$, $\frac{1}{9}$, $\frac{1}{12}$, illustrating all processes by objects, but using the written expressions from the first. Second half: continue and extend all work of the first half. Notation and numeration to 1,000,000. Multiplication with multipliers large enough to be expressed by two or three figures, and long division, no divisor larger than 25. Decimals to thousandths in addition and subtraction, and in multiplicands and dividends in multiplication and division.

LANGUAGE.—Work of the third year continued. Teach the sentence, kinds and parts, and give such written exercises as will review and extend knowledge of the proper use of capitals, punctuation marks, and abbreviations. Continue letter writing, both original and from dictation ; Second half, continue work of first half, and for new work teach nouns, their kinds, plurals and possessives.

GEOGRAPHY.—The earth as a whole, with land and water forms; the air, winds, dew, rain, snow, etc. Teach by observation as far as possible, relating that which is beyond vision to that which has been observed as far as can be done, and using pictures to still further assist the imagination. Second half, the use of globes

and maps and a brief general study of the hemispheres and their grand divisions, North America, the United States as a whole, and the New England and Middle States more in detail.

HISTORY.—Child's Book of History as a reader.

NATURE STUDY.—Continued study of plant life, emphasizing the changes from flower to fruit and seed; continued study of animals for recognition, habits, and adaptation of parts; Second half, more detailed study of the plant and its parts, with conditions of germination and growth, such as need of air, light, warmth, moisture and proper soil; pebbles, sand and clay with reference to life history of rocks.

Writing, Drawing and Music as directed by the supervisors of those branches in this and succeeding grades. Sewing under direction of the special teacher in this and the next two grades.

FIFTH YEAR.

READING.—Franklin Fourth Reader, and supplementary books.

SPELLING.—As in the fourth year, with words for supplementary drill: First half to page 69 in the authorized text book; Second half to page 93.

ARITHMETIC.—Continue all the work of the previous year. Whatever else is omitted see that oral drill and rapid written work with small numbers are given prominent places on the programme. In written work give many examples and problems with small numbers, rather than a few with large numbers. Long division with divisors of not more than three figures. In addition to constant practice with fractions already learned, teach $\frac{1}{5}$, $\frac{1}{10}$, and continue practice in the use of decimals and denominative numbers. In the use of the authorized text book omit all the examples involving long and tedious operations with large numbers; Second half, continue

work of the first half. Teach the reduction, addition, subtraction, multiplication and division of fractions to and including twenty-fourths. Teach least common multiple when needed as a means of finding the least common denominator of fractions, and factoring and cancellation when needed for practical use. Extend work of previous years in denominate numbers to include all simple reductions.

LANGUAGE.—Dictation, reproduction, description, narration work and letter writing continued. For new work teach the use of adjectives, with their comparisons, and pronouns. Second half, continue work of first half with careful attention to the use of punctuation marks, capitals, etc., and complete the study of the use of the parts of speech not already learned as outlined in Tarbell's Lessons from page 156 to the end of the book.

GEOGRAPHY.—Complete the study of the groups of states which compose the United States, and of South America. Second half, teach of Europe, Asia, Africa and Oceania, making the work simple, general and elementary, as would be suggested by the authorized text books.

HISTORY.—Scudder's Short History as a reading book.

NATURE STUDY.—Study of trees, for recognition by differences in size, form, leaves, bark, etc.; study of one insect, as grass-hopper, butterfly or moth, as type; gather cocoons and note metamorphosis. Second half, study of plants and their growth continued, emphasizing roots and stems; of rock-forming minerals, as quartz, mica, feldspar, hornblende, etc. Note use as building stones.

PHYSIOLOGY.—Book No. 1 of the Union Series as a reader, with such comment and instruction in this and succeeding grades as shall comply with the following law of this State: "Physiology and hygiene, which shall include special instruction as to the effects of alcoholic drinks, stimulants and narcotics on the human system shall

be taught as a regular branch of study to all pupils in schools supported by public money."

SIXTH YEAR.

READING.—Franklin Intermediate and supplementary books.

SPELLING.—As before, correlate spelling with every subject taught. Make every written exercise a lesson in spelling, and for supplementary drill use the authorized text book; First half, to page 111; Second half, to page 125.

ARITHMETIC.—Continue oral drill and rapid written work with small numbers. Review and extend work in fractions but do not attempt to master the too difficult problems of the text book. Teach decimals more fully than before, and give many problems involving the use of United States money and the reduction of denominative numbers. Second half, continue all work of first half. Practice in compound numbers should include all common reductions, but should omit the addition, subtraction (with the exception of the subtraction of dates), multiplication and division of compound numbers as such, longitude and time, metric equivalents, etc.

LANGUAGE AND GRAMMAR.—First half, (a) Language:—A careful review of the work of previous years, as suggested by the first 14 pages of the authorized text book. Suggest and, as far as possible, provide abundance of good selections of both poetry and prose for pupils' reading in this and all higher grades. Draw liberally on the Public Library. See that at least one brief selection or memory gem is memorized each month.

(b) Grammar.—(1) The analytic study of the sentence, subject and predicate, essential and complete; (2) the classification of words *according to their use in sentences*, to include nouns and pronouns. (Southworth and Goddard, pp. 77-98.)

Second half, (a) Language:—Review and extend the knowledge and practice of letter writing, including the heading, address, saluta-

tion, body, complimentary ending, signature and superscription, as suggested in the text book, pages 14 to 36.

(b) Grammar.—The classification of words continued to include all the parts of speech not already studied (pp. 98-126.)

GEOGRAPHY.—Mathematical, physical and political. Geography of the earth as a whole, with a general study of the hemispheres, as outlined in the first 26 pages of Butler's Complete Geography. Second half, North America, the United States as a whole, and the New England and Middle States in detail.

HISTORY—Scudder's Short History as a reading book.

NATURE STUDY.—Study of trees continued. In spring emphasize clusters of flowers, maple, elm, horse chestnut, etc., and in fall tree fruits and the dispersion of seeds. Study of birds, grouping according to habits ; e. g. aerial—perchers ; terrestrial—scratchers ; aquatic—swimmers, and the adaptation of parts to these habits.

PHYSIOLOGY.—Book No. 2 of the Union Series as a reading book, with comment and instruction as before.

SEVENTH YEAR.

READING.—Franklin Intermediate and supplementary readers.

SPELLING.—Work of the sixth year continued. For supplementary drill use the text book : First half to page 135; Second half to page 145.

ARITHMETIC.—Review constantly the work of all preceding years, but especially the work in fractions and denominate numbers. For advance work take up percentage, with applications to profit and loss, insurance, brokerage, taxes, etc. Second half, to work of first half add interest, simple and compound, with applications to

promissory notes and discounts at banks. Note that "Days of Grace" are no longer required on commercial paper other than sight drafts.

LANGUAGE AND GRAMMAR.—First half, (a) Language:—To the letter writing, dictation and reproduction exercises of the previous year add narrative writing, with careful attention to capitals, punctuation and paragraphing as before. No day should be allowed to pass without some form of composition exercises as indicated above.

(b) Grammar.—Sentence building; the base of a sentence, with modifiers; sentence analysis (pp. 126–156.)

Second half, (a) Language.—The work of the first half continued and extended. It is of far more importance to any pupil that he should be able to write a properly arranged and well-worded letter or express himself tersely and clearly in orderly narration than that he should know much of technical grammar, and excellence in the latter should never be sought at the expense of the former.

(b) Grammar.—Structure of sentences continued, reviewing and extending work of past years. Begin the classification of the parts of speech according to *kind*, *form* and *use*; nouns (pp. 156–183.)

GEOGRAPHY.—Atlantic, Gulf and Central States; Second half, Rocky Mountain and Pacific States and Territories, British America, Mexico, the Central American Republic and other States, and West Indies.

HISTORY.—Discovery, exploration and conquest of America to date of first permanent English settlement; Second half, the settlement of North America to the beginning of the French and Indian war.

NATURE STUDY.—Grains and grasses in the fall; rose family in spring. For animal study specialize on some typical family, as e. g.

for marine animals, the oyster or clam, the lobster or crab. Compare with vertebrates (fish). For work in minerals, the study of some common metals and their ores, as iron, copper, etc.

PHYSIOLOGY.—First half, food and digestion; Second half, the blood, blood vessels and circulation. General facts relating to laws of health are to be emphasized rather than minor details of structure. Teach origin and effects of the use of alcohol as required by State law.

EIGHTH YEAR.

READING.—New Fifth Reader and supplementary books.

SPELLING.—Relate spelling to all other subjects taught as in previous years and use the authorized text book for additional drill. First half to page 155: Second half to page 163.

ARITHMETIC.—Review the work of all previous years, with further applications of the principles of percentage and interest to stocks and bonds, exchange, etc., and add partnership, ratio and proportion. Of subjects treated in the authorized text book omit equation of payments, problems in exchange involving interest bearing drafts, and the more complicated problems in partnership. Second half, involution, evolution, to include second and third roots, and mensuration of plane surfaces to and including circles. (This work is an advance on that of previous years, and need not be entered upon before September, 1898, if classes are not sufficiently advanced to go so fast.)

LANGUAGE AND GRAMMAR.—First half, (a) Language—Letter writing, reproduction exercises and narrative writing continued, with careful attention to capitals, punctuation and paragraphing as before. Relate language to all subjects studied by giving the preference in the choice of topics to those which are suggested by the study of history, geography, etc.

(b) Grammar.—(1) Analysis and synthesis of sentences continued ; (2.) Classification of words as to kinds, forms and uses continued, to include pronouns and adjectives. (pp. 183–219.)

Second half, (a) Language :—To exercises previously suggested add descriptive writing with subjects chosen as in the first half. Choice extracts of prose and poetry should be studied for the sentiment conveyed as well as for beauty of style and elegance of diction. Do not forget the direction given at the beginning of the course that at least one selection each month should be carefully memorized by every pupil.

(b) Grammar :—To a constant review of the work of all past years add the study of verbs as to kinds, forms, uses, etc. (pp. 219–263).

GEOGRAPHY.—South America and Europe. Second half, Asia, Africa, Oceania, with a general study of the principal commercial routes of the world, and of the chief exports of leading commercial ports.

HISTORY.—The conquest of Canada, and the development of the English colonies in America into the United States to the time of the Treaty of Paris in 1783. Second half, the establishment, growth and history of the Union under the Constitution to the administration of Andrew Jackson, 1829.

PHYSIOLOGY.—The study of the human body as outlined in the authorized text book, Union Series, Book 3, to include the respiratory system, the bones, joints and muscles. Second half, study of the subject as outlined in the text book completed.

NATURE Study.—Birds, from observation, for recognition, knowledge of the time of arrival and departure of those which are migratory, habits, food, nesting, etc. Pupils ought at the end of the year to know from personal observation a dozen kinds. (One observer has seen and studied 120 kinds in Lowell and vicinity, of

which lists will be furnished on application.) In mineral study, the coal series. A study of combustion as illustrated in the candle flame and to be associated with the study of the coal series, optional though recommended.

NINTH YEAR.

READING.—New Fifth Reader, Masterpieces of American Literature, and other supplementary books. Read and study as literature Irving's *Rip Van Winkle* and Longfellow's *Evangeline* in the first half year, and Whittier's *Snow Bound*, Hawthorne's *Great Stone Face* and Lowell's *Vision of Sir Launfal* in the second.

SPELLING.—As in previous years, with supplementary drill on words found in the last part of Worcester's Speller in the first half, and on the whole book in the last half.

ARITHMETIC.—Ratio, proportion, involution, evolution, to include second and third roots, mensuration of plane figures and comparison of similar surfaces. Second half, general review of the whole subject.

ALGEBRA.—The expression of quantities by algebraic symbols ; the equation, including transposition of terms, solution, verification, etc. ; many problems to be solved by the use of simple equations, and the addition, subtraction, multiplication and division of integral algebraic expressions, with theory of negative quantities, the use of parenthesis, factoring, etc.

LANGUAGE AND GRAMMAR.—First half, (a) Language:—Continue every form of exercise hitherto suggested, with special attention to paragraphing and to discrimination in the choice of words, synonyms, variety of expression, etc. In letter writing add to familiar and business letters formal notes of invitation and answers to the same.

(b) Grammar :—No division of work into first half and second half is attempted. In the whole year review and extend the work of previous years.

GEOGRAPHY.—Give special attention to local geography and that of the State, and review briefly the mathematical, physical and political geography of the earth as a whole, and of the United States and other political divisions of North America. Omit geographical study in the last half of the year.

HISTORY.—First half, complete the history of the United States to date. Second half, review the whole subject.

BOOK-KEEPING.—Devote to book-keeping half the time allotted to penmanship, under the direction of the special teacher.

NATURE STUDY.—Trees from observation. Pupils ought to be able at the end of the year to locate and describe fifty varieties which they have seen in the city. Collections of woods are recommended.

PHYSICS.—(Optional) As outlined in the authorized text book.

HIGH SCHOOL.

FIRST YEAR.

<i>Classical Course.</i>	<i>College Course.</i>	<i>English Course.</i>
First Half Year.	First Half Year.	First Half Year.
Latin.	Latin.	Outlines of History.
Algebra.	Algebra.	Algebra.
English Lessons.	Greek History.	English Lessons.
	English Half Course.	Manual Training.

Second Half Year.	Second Half Year.	Second Half Year.
Latin.	Latin.	History and English.
Algebra.	Algebra.	Algebra.
Physical Geography.	Roman History.	Physical Geography.
English Half Course.	English Half Course.	Manual Training.

SECOND YEAR.

First Half Year.	First Half Year.	First Half Year.
Cæsar.	Cæsar.	French I.
Geometry.	Greek I.	Geometry.
Physics.	Geometry.	Physics.
English Half Course.	English Half Course.	English.
		Manual Training.
Second Half Year.	Second Half Year.	Second Half Year.
Cæsar.	Cæsar.	French I.
Geometry.	Greek I.	History.
Physics.	Geometry.	Geometry.
English Half Course.	English Half Course.	Physics.
		English.
		Manual Training.

THIRD YEAR.

First Half Year.	First Half Year.	First Half Year.
Cicero.	Cicero.	French II.
French I.	Greek II.	Rhetoric.
Chemistry.	Coll. Physics.	Chemistry.
Arithmetic.	Coll. Mathematics.	Arithmetic.
Rhetoric.	Coll. English I.	Astronomy.
	Coll. French I.	Manual Training.
Second Half Year.	Second Half Year.	Second Half Year.
Cicero.	Cicero.	French II.
French I.	Greek II.	Rhetoric.
Chemistry.	Coll. Physics.	Chemistry.
Rhetoric.	Coll. Mathematics.	Physiology.
Physiology	Coll. English I.	Const. History.
Const. History.	Coll. French I.	Manual Training.

FOURTH YEAR.

First Half Year.	First Half Year.	First Half Year.
Virgil.	Virgil.	French III.
French II.	Greek III.	German.
German.	Coll. French II.	Literature.
Literature.	Coll. English II.	Astronomy.
Astronomy.		
Second Half Year.	Second Half Year.	Second Half Year.
Virgil.	Virgil.	French III.
French II.	Greek III.	German.
German.	Coll. French II.	Literature.
Literature.	Coll. English II.	Botany.
Geology.	Solid Geometry.	Geology.
Botany.		Solid Geometry.
Solid Geometry.		

The following course is recommended for those who are fitting for Harvard College or Radcliffe :—

FIVE YEARS' COLLEGE COURSE.

FIRST YEAR.

First Half.	Second Half.
Latin.	Latin.
Algebra.	Algebra.
Greek History.	Roman History.

SECOND YEAR.

First Half.	Second Half.
Cæsar.	Cæsar.
Greek I.	Greek I.
Geometry.	Geometry.
English Half Course.	English Half Course.

THIRD YEAR.

First Half.

College English I.
Physics.
Cicero.
Greek II.

Second Half.

College English I.
Physics.
Cicero.
Greek II.

FOURTH YEAR.

First Half.

College Mathematics.
Greek and Latin Prose, and
History.
College French I, Half Course.
College English II.

Second Half.

College Mathematics.
Greek and Latin Prose, and
History.
College French I, Half Course
College English II.

FIFTH YEAR.

First Half.

Virgil.
College French.
College Physics.
Homer.
*German.

Second Half.

Virgil.
College French.
College Physics.
Homer.
*German.
*Solid Geometry.

*Optional.

MANUAL TRAINING COURSE.

FIRST YEAR.

First Half Year.

Latin.
Algebra.
English (Two hours.)
History.

Man. Training { Carpentry
and
Drawing.

Second Half Year.

Latin.
Algebra.
History and English.
Physical Geography.

Man. Training { Carpentry
and
Drawing.

SECOND YEAR.

First Half Year.		Second Half Year.
Latin.		Latin.
Geometry.		Geometry.
Physics		Physics.
English (Two hours.)		English (Two hours.)
Man. Training	{ Wood-turning and Drawing.	Man. Training { Pattern-making and Drawing.

THIRD YEAR.

First Half Year.		Second Half Year.
French.		French.
College Mathematics.		College Mathematics.
English.		English.
Chemistry.		Chemistry.
Man. Training	{ Forging and Drawing.	Man. Training { Moulding and Drawing.

FOURTH YEAR.

First Half Year.		Second Half Year.
French.		French.
German.		German.
English.		English.
College Physics.		College Physics.
Man. Training	{ Machine-work and Drawing.	Man. Training { Machine-work and Drawing.

An outline of the courses of study is shown to each pupil who seeks admission to the high school in September, together with the following notes and explanations. These are reprinted here that parents and prospective pupils may have time to study them in advance :—

"The following outline of courses of studies is to assist those pupils who may be in doubt in regard to a proper choice of subjects. Pupils are earnestly advised to consult their parents before making their decision, as no change can be made during the term. They will have the advice of teachers also, to guide them.

The school year is divided into two half-years. Pupils are required to take three studies each half-year unless excused on account of illness. In all courses the pupil must take English, either as a full course or half-course, through the entire school attendance. In addition to this work pupils are required to take general exercises, as Elocution, Calisthenics, Military Drill, and Music. Each pupil must complete six first year, six second year and six third year studies, making a total of eighteen for a three-years' diploma. For a four-years' diploma, he must complete six fourth year studies additional, making a total of twenty-four.

Pupils who have completed sixteen, ten, or four studies will be classed respectively as fourth year, third year or second year students. Those who have completed a less number for each year will be classed respectively as third year, second year or first year students.

The English Course covers a period of three years; a fourth year may be added. It is intended for those pupils who desire a special preparation for business. First year: Algebra, History, English, Physical Geography, and Bookkeeping. Second year: French, English, Geometry and Physics. Third year: French, English, Chemistry, Arithmetic or Astronomy, Physiology or Constitutional History. In this course Manual Training is elective. Fourth year: French, German, English, Latin, Geology, Astronomy, Solid Geometry.

The Manual Training Course includes the academic studies required in fitting for such schools as the Lawrence Scientific School and the Massachusetts Institute of Technology.

The Classical Course covers a period of four years, and includes the general studies of a High School. It furnishes preparation for admission to the Normal School; and with the Mathematics of the College Course, furnishes preparation for the Institute of Technology, the Lawrence Scientific School, and other institutions of similar character. First year: Latin, English, Algebra and Physical Geography. Second year: Latin, English, Geometry and Physics. Third year: Latin, French, Chemistry or Arithmetic, English, Physiology or Constitutional History. Fourth year: Latin, French or German, English, Botany, Geology or Astronomy.

The College Course furnishes preparation for admission to any American College, and may be completed in four or five years, at the option of parents or guardians. First year: Latin, Algebra, Greek or Roman History, English. Second year: Latin, Greek, English, Geometry. Third year: Latin, Greek, Physics and Mathematics. Fourth year: Latin, Greek, French, English."

NORMAL SCHOOL COURSE.

The following are the requirements for admission to a normal school as printed in a circular issued by the State Board of Education. By the omission of astronomy and geology the classical course becomes the one which meets the conditions imposed:

"Candidates for admission to any one of the normal schools must have attained the age of seventeen years complete, if young men, and sixteen years, if young women; and must be free from any

disease or infirmity which would unfit them for the office of teacher. They must present certificates of good moral standing, give evidence of good intellectual capacity (*records of their scholarship standing in the high schools are desired*) and be graduates of high schools whose courses of study have been approved by the Board of Education; or they must have received, to the satisfaction of the principal and the Board of Visitors of the school, the equivalent of a good high school education. The examinations for admission shall cover such elementary and high school subjects as may be determined by the Board.

For 1896 and thereafter, until further notice, the examinations will embrace papers on the following groups, a single paper with a maximum time allowance of two hours to cover each of groups 1, 2 and 4, and a single paper with a maximum time allowance of one hour to cover each of groups 3 and 5 (*five papers with a maximum time allowance of eight hours*) :—

1. *Languages*.—(a) English, with its grammar and literature, and (b) one of the three languages,—Latin, French and German. The candidate is earnestly advised to study *Latin* and either *French* or *German*.

2. *Mathematics*.—(a) Arithmetic, (b) the elements of algebra, and (c) the elements of plane geometry.

3. *History and Geography*.—The history and civil government of Massachusetts and the United States, with related geography and so much of English history as is directly contributory to a knowledge of United States history.

4. *Sciences*.—(a) Physical geography, (b) physiology and hygiene, (c) physics, (d) botany, and (e) chemistry.

5. *Drawing and Music*.—(a) Elementary, mechanical and free-hand drawing, with any one of the topics,—form, color and arrangement, and (b) musical notation.”

Roll of Teachers.

Giving Name, Grade, Residence, Date of Election, and Salary.

Following are the changes in the roll:

RESIGNED.

	Term of Service.
Frank F. Coburn, High School	17 years.
Adelaide A. Jackson, Training School	1 year.
Charlotte McDaniels, Central Street School	17 years.
Elizabeth G. Morgan, Edson School	1 year.
Annie E. Slavin, Charles Street School	10 years.
Katie E. McOwen, Chapel Street School	15 "
Martha A. Neal, Cabot Street School	50 "
Harriet B. Frye, Highland School	15 "
Gertrude Allen, Plain Street School	3 "

TRANSFERRED.

Carrie J. Bailey, from the Powell Street School to the Pine Street School.

Lillian L. Sproat, from the Dover Street School to the Powell Street School.

Clare S. Reed, from the Training School Kindergarten to the Bartlett School Kindergarten.

S. Hortense Tabor, from the Bartlett Kindergarten to the Training School Kindergarten.

Rose E. McVey, from the Cottage Street School to the Chapel Street School.

Maggie M. Harrahan, from the Cottage Street School to the Charles Street School.

Elizabeth F. Blandin, from the Bartlett School to the Varnum School.

ELECTED.

Cyrus W. Irish, A.B., to the Principalship of the High School.

Clifford R. Harris, B.Sc., to the High School.

Percival Gates Barnard, A.B., to the High School.

Ellen B. Duckworth, A.B., to the High School.

Helen M. Lambert, B.L., to the High School.

Mary V. Johnson, to the Carter Street School.

Mary T. Whelley, to the Cabot Street School.

Elizabeth G. Lawler, to the Central Street School.

Helen A. Drury, to the Middlesex Village School.

Edith M. Abbott, to the Plain Street School.

Lilla M. Stanley, to the Plain Street School.

Katherine F. Brady, to the Carter Street School.

Grace I. Washburn, to the Pine Street School.

Gertrude A. Roberts, to the Agawam Street Kindergarten.

Helen M. Shean, to the Training School.

Annie R. Chase, to the Lincoln School.

Helen M. Osgood, to the Pawtucket School.

Irma V. Hodgman, to the Lincoln School.

Esther G. Donlan, to the Green School.

Julia B. Riordan, to the Edson School.

Helen E. Gookin, to the Butler School.

Mary E. Walsh, to the Varnum School.

Sadie E. Tully, to the Butler School.

Therese F. Donoghue, to the Butler School.

Grace R. Sanders, to the Highland School.

Alice C. O'Brien, to the Butler School.

Josephine Gould, to the Bridge Street Kindergarten.

Edith A. Andrews, to the Dover Street Kindergarten.

Edith A. Howitt, to the Moody Kindergarten No. 2.

HIGH SCHOOL.

Kirk and Anne Streets.

CYRUS W. IRISH, Principal, 19 Mt. Vernon St.	1885	\$2,500
FRANK B. SHERBURNE, 58 Dover St., <i>Language</i>	1883	2,200
MARY A. WEBSTER, 45 Varney St., <i>Language and Mathematics</i>	1859	900
ELIZABETH McDANIELS, 408 E. Merrimack St., <i>Literature</i>	1868	800
CHARLOTTE E. DRAPER, 47 Belmont Ave., <i>Language and Science</i>	1870	800
ALICE J. CHASE, 263 Fairmount St., <i>Science and Language</i>	1877	800
SUSIE L. D. WATSON, 31½ Dutton St., <i>Language and Mathematics</i>	1885	800
ADELAIDE BAKER, 136 Myrtle St., <i>Language</i>	1885	800
JENNIE L. ALLEN, 947 Middlesex St., <i>Science</i>	1885	800
EMMA L. BRADLEY, 485 Westford St., <i>Language</i>	1890	800
GERTRUDE A. RODLIFF, South Chelmsford, Mass., <i>English</i>	1890	800
MARIETTA CASSIDY, 4 Fifth Ave., <i>Language</i>	1890	800
GEORGIANNA F. VINTON, 52 Fourth St., <i>English</i>	1872	800
GRACE M. GOODHUE, 120 School St., <i>History and Mathematics</i>	1893	800
BESSIE E. HUNTOON, 182 Mt. Vernon St., <i>Language</i>	1894	800
GRACE WARD, 279 Chelmsford St., <i>Mathematics</i>	1895	800
MARY E. O'CONNOR, 91 Tremont St., <i>English</i>	1896	700
CARL D. BURTT, 75 Fort Hill Ave., <i>History</i>	1895	1,000
FRED R. WOODWARD, 11 Simpson St., <i>Mathematics</i>	1895	1,000
PERCIVAL G. BARNARD, 68 Howard St., <i>English and Latin</i>	1897	800
HELEN M. LAMBERT, 283 Pawtucket St., <i>Science</i>	1897	650
ELLEN B. DUCKWORTH, 32 Princeton St., <i>English</i>	1897	650
GEORGE R. CAROTHERS, 466 Fletcher St., <i>Manual Training</i>	1895	1,500
C. R. HARRIS, 54 Kirk St., <i>Manual Training</i>	1897	1,000

BARTLETT GRAMMAR SCHOOL.

Wannalancit Street.

CYRUS A. DURGIN, Master, 78 Varney St.,	1892	\$1,800
MARY B. KENT, 1st and 2d, 818 Merrimack St.	1859	600
BELLE A. PRESCOTT, 3d and 4th, 68 Mt. Washington St.	1878	600
BELLE F. BATCHELDER, 3d and 4th, 66 Arlington St.	1883	600
AMY L. TUCKE, 5th and 6th, 111 Butterfield St.	1880	600
BLANCHE A. CHENEY, 3d and 4th, 24 Marginal St.	1896	600
M. IDA HOWE, 7th and 8th, 84 Methuen St.	1873	600
FRANCES M. TALBOT, 9th and 10th 159 Pawtucket St.	1882	600

MORRILL SCHOOL.

Common and Adams Streets.

ELLEN F. COUGHLIN, Principal, 3d and 4th, 203 Cross St. . .	1853	\$650
NELLIE M. BROWN, 1st and 2d, 426 Fletcher St. . . .	1865	600
ANNIE M. COURTNEY, 5th, 24 La Grange St. . . .	1887	600
CHARLOTTE E. BROWN, 6th, 426 Fletcher St. . . .	1870	600

SCHOOL STREET SCHOOL.

School Street, between Pawtucket and Bowers Streets.

EUGENIA L. HOGAN, Principal, 1st, 2d and 3d, 4 Crane's Ave. .	1889	\$625
FANNIE A. HARDY, 4th, 5th and 6th, 22 Third St. . . .	1890	600

CROSS STREET SCHOOL.

Cross Street, between Fletcher and Mt. Vernon Streets.

SARAH E. SCALES, Principal, 1st and 2d, 28 Ralph St. . . .	1866	\$650
ELLEN M. WHITE, 3d and 4th, 54 Hanks St. . . .	1863	600
A. GERTRUDE STILES, 5th, 72 Varney St. . . .	1895	600
KATHERINE KELLY, 6th, 77 Mt. Washington St. . . .	1893	600

BUTLER GRAMMAR SCHOOL.

Gorham Street.

CORNELIUS F. CALLAHAN, Master, 152 Fenwick St. . . .	1884	\$2,000
NELLIE F. MURPHY, 1st and 2d, 85 Sherman St. . . .	1878	600
MARGARET T. McCARTHY, 1st and 2d, 647 Market St. . . .	1890	600
MARY I. DONLAN, 3d and 4th, 455 High St. . . .	1890	600
ANASTASIA C. CORBETT, 3d and 4th, 32 Highland St. . . .	1878	600
MARY E. LANE, 5th and 6th, Billerica	1894	600
DELIA T. BRADY, 5th and 6th, 183 Chapel St. . . .	1883	600
KATE E. KELLEY, 7th and 8th, 129 Moore St. . . .	1883	600
AGNES M. FOLEY, 7th and 8th, 37 Newhall St. . . .	1887	600
MARY L. MCSORLEY, 9th and 10th, 30 Ash St. . . .	1879	600
JENNIE S. NOBLE, 9th and 10th, 4 Carter Place	1894	600
KATHERINE L. WALSH, 11th and 12th, 5 Watson St. . . .	1895	600
KATHERINE M. USHER, 11th and 12th, 465 Parker St. . . .	1895	600
GRACE G. MARREN, 7th and 8th, 56 Butterfield St. . . .	1896	500
HELEN E. GOOKIN, 11th and 12th, 300 Concord St. . . .	1897	450
SADIE E. TULLY, 11th and 12th, 105 Westford St. . . .	1897	450
THERESE F. DONOGHUE, 6th and 7th, 22 Royal St. . . .	1897	450
ALICE C. O'BRIEN, 8th and 9th, 184 South St. . . .	1897	450

LYON STREET SCHOOL.

Corner of Lyon and Central Streets.

ALICE T. LEE, Principal, 1st and 2d, 12 South Walker St.	.	1878	\$650
ANNABEL COSTELLO, 3d and 4th, 203 Nesmith St.	.	1888	600
MARY J. McCARRY, 4th and 5th, 21 Mead St.	.	1881	600
NELLIE A. HUNT, 6th, 6 Elm St.	.	1884	600

CARTER STREET SCHOOL.

Carter Street.

ISABELLE T. VINALL, Principal, 1st and 2d, 11 Simpson Place		1873	\$650
MARGARET J. CONNORS, 3d and 4th, 13 Pollard St.	.	1894	600
CORNELIA M. DAVIS, 6th, 549 Westford St.	.	1871	600
KATHERINE F. BRADY, 4th, 173 Chapel St.	.	1897	450
MARY V. JOHNSON, 5th and 6th, 101-1 Prince St.	.	1897	450

AGAWAM STREET SCHOOL.

Corner of Agawam and Barrington Streets.

MARY A. FAY, Principal, 1st and 2d, 115 Stackpole St.	.	1889	\$625
SUSAN G. NEILON, 3d and 4th, 135 Andrews St.	.	1895	600
ROSE DONNELLY, 5th and 6th, 19 Hudson St.	.	1896	500

LONDON STREET SCHOOL.

Corner of London and West Streets.

LIZZIE R. MAGUIRE, Principal, 1st, 2d and 3d, 112 Pleasant St.		1884	\$650
ALICE A. MASTERSON, 4th 5th and 6th, 100 Bourne St.	.	1892	600
MINNIE F. HILL, 4th, 5th and 6th, 68 Thorndike St.	.	1887	600

WEED STREET SCHOOL,

Corner of Weed and Gorham Streets.

MARY B. McGOVERN, Principal, 1st and 2d, 31 Pearl St.	.	1886	\$650
LILLA M. McEVoy, 3d and 4th, 181 Moore St.	.	1893	600
MARY J. CARMICHAEL, 5th and 6th, 27 Ellsworth St.	.	1893	600

LOWELL TRAINING SCHOOL.

(Telephone 531-3.

Charles and Lawrence Streets.

GERTRUDE EDMUND, Principal, 74 Huntington St.	1895	\$2,000
MABEL W. EWINGS, First Assistant, 127 Stackpole St.	1891	900
ADDIE B. MERRILL, 981 Bridge St.	1892	900
HELEN M. SHEAN, 84 South Whipple Street.	1891	800

CENTRAL STREET SCHOOL.

Central Street, opposite Hudson Street.

ELIZA COWLEY, 1st and 2d, 420 Lawrence St.	1857	\$650
KATE J. LAWLER, 4th and 5th, 260 High St.	1885	600
LILLA J. GREENHALGE, 6th, 123 Nesmith St.	1871	600
ELIZABETH G. LAWLER, 3d and 4th, 260 High St.	1897	450

AMES STREET SCHOOL.

Corner of Lawrence and Ames Streets.

AMANDA M. HADLEY, Principal, 1st, 89 Washington St.	1860	\$650
KATE F. MURPHY, 2d and 3d, 1 Carter Place	1885	600
MARY E. DREW, 4th and 5th, 36 Wamesit St.	1868	600
LIZZIE M. HADLEY, 6th, 4 Gates St.	1869	600

EDSON GRAMMAR SCHOOL.

Highland Street.

C. W. BURBANK, Master, 130 Bowers St.	1872	\$2,000
FRANCES M. WEBSTER, 1st and 2d, 45 Varney St.	1873	600
ROSALIE T. BURNS, 3d and 4th, Rogers St.	1878	600
ANNIE E. DONOVAN, 4th and 5th, 26 Madison St.	1895	600
MARY F. WARD, 5th and 6th, 220 Fletcher St.	1893	600
KATE J. HAYES, 7th and 8th, 15 Floyd St.	1879	600
MARGIE F. MARREN, 8th, 420 Fletcher St.	1886	600
SARAH J. CROSBY, 9th and 10th, 339 Gorham St.	1868	600
BERTHA M. ROWLANDSON, 10th, 11 Holyrood Ave.	1891	600
MARY A. BALCH, 11th and 12th, 242 Appleton St.	1865	600
JULIA B. RIORDAN, 11th and 12th, 58 Second Ave.	1897	450

CHARLES STREET SCHOOL.

Charles Street, between Gorham and Chapel Streets.

ALICE T. OWENS, Principal, 1st and 2d, 4 Belmont St.	.	1878	\$650
ELLA E. GARDNER, 3d and 4th, 109 Mansur St.	.	1871	600
ELLEN A. O'CONNELL, 3d and 4th, 9 Mead St.	.	1896	500
MAGGIE A. HARRAHAN, 5th and 6th, 32 Marshall St.	.	1882	600

CHAPEL STREET SCHOOL.

Chapel Street, opposite Pollard Street.

ROSE E. MCVEY, Principal, 1st, 2d and 3d, 46 Linden St.	.	1887	\$625
LIZZIE A. MOLLOY, 4th, 5th and 6th, 253 High St.	.	1887	600

ELIOT SCHOOL.

Corner Favor and Summer Streets.

ELLEN A. STILLINGS, Principal, 4th and 5th, 24 Bellevue St.	1875	\$650
ELLEN A. CORBETT, 1st and 2d, 32 Highland St.	1878	600
NELLIE T. O'GRADY, 3d, 73 Newhall St.	1881	600
LOYOLA McCANN, 6th, 17 Wentworth Ave.	1893	600

GREEN GRAMMAR SCHOOL.

Merrimack Street.

A. L. BACHELLER, Master, 43 Arlington St.	.	.	1874	\$2,000
RUTH B. BAILEY, 1st and 2d, 514 Moody St.	.	.	1871	600
CLARA A. HANAFORD, 3d and 4th, 1 Spaulding St.	.	.	1869	600
LIZZIE A. NOLAN, 5th and 6th, 301 Pawtucket St.	.	.	1876	600
CARRIE A. MILES, 7th and 8th, 318 Central St.	.	.	1882	600
LENA A. GOOKIN, 9th and 10th, 20 Walden St.	.	.	1880	600
KATE F. McCARTHY, 9th and 10th, 647 Market St.	.	.	1889	600
ELLA J. CARLETON, 11th and 12th, 1072 Bridge St.	.	.	1882	600
JENNIE E. FAY, 11th and 12th, 115 Stackpole St.	.	.	1891	600
MARY M. KEARNEY, 94 Andrews St.	.	.	1895	600
ESTHER G. DONLAN, 3d and 4th, 445 High St.	.	.	1897	450

KIRK STREET SCHOOL.

Corner of Kirk and Lee Streets.

ELIZA A. DAVIS, Principal, 1st, 2d and 3d, 549 Westford St.	1881 ^{xx}	\$625
LAURA H. PALMER, 4th, 5th and 6th, 55 13th St.	1882	600

ROLL OF TEACHERS.

CABOT STREET SCHOOL.

Corner Cabot and Ford Streets.

NELLIE T. GILDAY, Principal, 5th and 6th, 32 Varney St. . .	1886	\$650
MARY S. MURPHY, 3d and 4th, 112 Jefferson St. . . .	1887	600
KATHARINE T. LENNON, 1st and 2d, 144 School St. . . .	1885	600
MARY T. WHELLEY, 5th and 6th, 68 Fenwick St. . . .	1897	450

CHEEVER STREET SCHOOL.

Cheever Street.

IDA J. CLARKE, Principal, 5th and 6th, 356 E. Merrimack St. .	1887	\$650
MARY E. MEEHAN, 1st, 2d, 3d and 4th, 215 Worthen St. . . .	1891	600
ANNA A. SARGENT, 5th and 6th, 223 Liberty St. . . .	1864	600

WORTHEN STREET SCHOOL.

Worthen Street, between Market Street and Broadway.

MARY L. HILL, Principal, 1st and 2d, 228 Worthen St. . . .	1858	\$650
ESTHER V. GREEN, 3d and 4th, 188 Cross St. . . .	1889	600
MARY J. ALGER, 5th and 6th, 115 Branch St. . . .	1868	600
MARY A. MARREN, 5th and 6th, 420 Fletcher St. . . .	1890	600

HIGHLAND GRAMMAR SCHOOL.

(Telephone 366-5.)

Pine Street.

CHARLES W. MOREY, Master, 14 Belmont St.	1880	\$2,000
FLORA I. MOFFITT, 1st and 2d, 386 Westford St.	1887	600
MARY F. FOSS, 1st and 2d, 215 Stevens St.	1891	600
ABBIE F. WOODWARD, 3d and 4th, 165 Branch St.	1869	600
ESTELLE L. WHITNEY, 3d and 4th, 139 Chapel St.	1885	600
LEONORA K. BATTLES, 5th and 6th, 147 Howard St.	1895	600
NELLIE A. COBURN, 5th and 6th, 62 South Walker St.	1886	600
LUELLA A. WARDWELL, 7th and 8th, 33 Dover St.	1870	600
MINNIE C. GRAY, 7th and 8th, 106 Liberty St.	1890	600
FANNIE M. CLARK, 9th and 10th, 33 Dover St.	1874	600
EDITH L. MONROE, 9th and 10th, Billerica.	1885	600
CARRIE M. SPRAGUE, 11th and 12th, 147 Howard St.	1890	600
GRACE R. SANDERS, 11th and 12th, 67 South Loring St.	1897	450

HIGHLAND ANNEX, AT FRANKLIN SCHOOL-HOUSE.

ARVILLA L. READER, 11th and 12th, 216 Appleton St.	. . . . .	1871	\$600
GRACE F. WARD, 9th and 10th, 6 Appleton Place	. . . . .	1893	600
ANNIE E. KING, 7th and 8th, 233 Stackpole St.	. . . . .	1895	600

FRANKLIN SCHOOL.

Corner Branch and Middlesex Streets.

SARAH C. FISKE, Principal, 1st and 2d, 246 Appleton St.	. . . . .	1866	\$650
LIZZIE S. LOWE, 3d, 13 Nichols St.	. . . . .	1857	600
MARION J. STEVENSON, 4th, 63 Princeton St.	. . . . .	1878	600
KATE G. JONES, 5th and 6th, 119 Andover St.	. . . . .	1880	600

PLAIN STREET SCHOOL.

Corner Plain and Powell Streets.

LAURA E. LEE, Principal, 5th and 6th, 189 Grand St.	. . . . .	1873	\$650
FLORA H. SPRAGUE, 1st, 2d and 3d, 589 School St.	. . . . .	1882	600
MARY A. FARNHAM, 1st, 2d and 3d, 90 Gates St.	. . . . .	1887	600
EDITH M. ABBOTT, 4th and 5th, Cor. Plain and Fruit Sts.	. . . . .	1897	450
LILLA M. STANLEY, 5th and 6th, 1 Horn St.	. . . . .	1897	450

PINE STREET SCHOOL.

Pine Street, Corner of Gibson Street.

CARRIE J. BAILEY, Principal, 1st, 2d and 3d, 16 Loring St.	. . . . .	1884	\$625
GRACE I. WASHBURN, 4th and 5th, 84 West Sixth St.	. . . . .	1897	450

DOVER STREET SCHOOL.

Dover Street, between Middlesex and Grove Streets.

CLARA B. HORNE, Prin., 1st and 2d, 87 South Highland St.	. . . . .	1877	\$650
CLEMENTINE H. BOWERS, 3d and 4th, 18 Loring St.	. . . . .	1876	600
BERTHA GARDNER, 5th and 6th, 32 Robbins St.	. . . . .	1887	600

MIDDLESEX VILLAGE SCHOOL.

HATTIE F. WAKEFIELD, Principal, 2 Loring St.	. . . . .	1889	\$625
MARTHA ROGERS, 131 Cumberland Road	. . . . .	1895	600
HELEN A. DRURY, 26 Union St.	. . . . .	1897	450

POWELL STREET SCHOOL.

Powell Street, near Liberty Street.

VIOLA A. HAMBLETT, Prin., 4th, 5th and 6th, 463 School St.	1876	\$625
LILLIAN L. SPROAT, 1st, 2d and 3d, 57 Claire St. . .	1895	600

ABRAHAM LINCOLN GRAMMAR SCHOOL.

Chelmsford Street.

JAMES L. MELLEN, Master, 233 Fayette St. . . .	1893	\$1,600
MARGARET A. SPARKS, 1st and 2d, 90 South Whipple St.	1894	600
GRACE SCRIBNER, 3d and 4th, 190 Liberty St. . . .	1893	600
MARY A. GORMAN, 8th and 9th, 76 Charles St. . . .	1895	600
ANNA A. BURNHAM, 5th and 6th, 11 Puffer St. . . .	1894	600
ELLEN L. FLOYD, 9th and 10th, 124 Stevens St. . . .	1887	600
ELLA E. PRESCOTT, 11th and 12th, 36 Liberty St. . . .	1894	600
ANNIE R. CHASE, 11th and 12th, 19 Robinson St. . . .	1897	450
IRMA V. HODGMAN, 7th and 8th, 66 Nichols St. . . .	1897	450

HOWARD STREET SCHOOL.

Howard Street, between Chelmsford and Hale Streets.

MARION E. GREENE, Principal, 1st and 2d, 143 Howard St.	1884	\$650
ALICE C. GREENE, 3d and 4th, 143 Howard St. . . .	1894	600

GRAND STREET SCHOOL.

(Howard Street Annex.)

Grand Street, between Westford and Middlesex Streets.

JENNIE M. BENNETT, 5th, 94 Dover St.	1885	\$600
MINNIE A. WILLSON, 6th, 28 Cambridge St.	1887	600

MOODY GRAMMAR SCHOOL.

Corner of High and Rogers Streets.

WILLIAM A. GREENE, Master, 263 Westford St. . . .	1883	\$2,000
MERCENA F. WHITEHORN, 1st and 2d, 519 Beacon St. .	1877	600
CARRIE A. PAUL, 3d and 4th, 60 Fort Hill Ave. . . .	1891	600
CARRIE E. ERSKINE, 5th and 6th, 138 Mt. Vernon St. .	1893	600
ELIZABETH W. FROST, 7th and 8th, 60 Fort Hill Ave. .	1857	600
ELLA M. BREEN, 7th and 8th, 23 Marsh St.	1893	600
FRANCES E. GARITY, 9th and 10th, 34 Read St. . . .	1874	600
MAUD A. JONES, 11th and 12th, 259 Gorham St. . . .	1893	600
FRANCES E. HARDMAN, 11th and 12th, 263 Fairmount St.	1873	600

POND STREET SCHOOL.

Corner of High and Pond Streets.

MARIETTA HILL, Principal, 1st and 2d, 305 E. Merrimack St.	1870	\$650
WINNIFRED HAGGERTY, 3d and 4th, 52 Huntington St.	. . 1884	600
ADELAIDE CROWLEY, 5th and 6th, 115 Fort Hill Ave.	. . 1894	600

HIGH STREET SCHOOL.

High Street, between Chestnut and Everett Streets.

CLARA A. EMERSON, Prin., 1st, 2d and 3d, 216 Appleton St.	. . 1869	\$625
ELIZABETH WORTHLEY, 4th, 5th and 6th, 27 Canada St.	. . 1891	600

FAYETTE STREET SCHOOL.

Fayette Street, between Chestnut and Everett Streets.

GEORGIA A. HARNDEN, Prin., 1st, 2d and 3d, 149 Pleasant St.	1885	\$625
MARY A. MEEHAN, 4th, 5th and 6th, 100 Bourne St.	. . 1895	600

SYCAMORE STREET SCHOOL.

Sycamore Street.

JEANETTE T. COSTELLO, 1st, 2d and 3d, 293 Nesmith St.	1893	\$625
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PAWTUCKET GRAMMAR SCHOOL.

Mammoth Road, Pawtucketville.

WILLIAM P. BARRY, Master, 1280 Middlesex St.	. . .	1887	\$2,000
ELLEN M. MACDONALD, 1st and 2d, 120 School St.	. . .	1878	600
CARRIE M. HART, 5th and 6th, 16 Varney St.	. . .	1887	600
ELIZABETH A. HART, 7th and 8th, 16 Varney St.	. . .	1886	600
JULIA M. HEALEY, 9th and 10th, 108 Bowers St.	. . .	1870	600
EFFIE I. MARSHALL, 11th and 12th, 28 Riverside St.	. . .	1887	600
HELEN M. OSGOOD, 10th and 11th, 201 School St.	. . .	1897	450

MAMMOTH ROAD SCHOOL.

Pawtucket School Building.

ELLEN M. HOLDEN, Principal, 1st and 2d, 21 Eighth Ave.	1876	\$650
NELLIE F. DAVIDSON, 3d, 4th and 5th, 20 Lombard St.	. . 1891	600
Alice B. BESSE, 5th and 6th, 581 Rogers St.	. . . 1891	600

ROLL OF TEACHERS.

LEXINGTON AVENUE SCHOOL.

Lexington Avenue, near Varnum Avenue.

HELEN KOHAWN, ungraded, 63 Thirteenth St.	1877	\$625
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VARNUM GRAMMAR SCHOOL.

Myrtle Street, Centralville.

HENRY H. HARRIS, Master, 26 Massachusetts Corporation .	1893	\$1,600
ELIZABETH C. KENNEDY, 1st and 2d, 42 Eighteenth St. .	1884	600
MARY F. WING, 3d and 4th, 99 Third St.	1879	600
MARIA W. ROBERTS, 5th and 6th, 89 Christian St. .	1875	600
HARRIET BRADLEY, 5th and 6th, 62 Fourth St. . .	1854	600
SARAH A. BRADLEY, 7th and 8th, 555 Bridge St. .	1857	600
GRACE W. BALCH, 7th and 8th, 434 Westford St. .	1894	600
ALICE R. KEESE, 8th and 9th, 4 Sanborn St. . . .	1881	600
ADA E. HOOLE, 9th and 10th, 173 Warren St. . . .	1894	600
ROSA A. DOWD, 10th and 11th, 237 Tenth St. . . .	1884	600
JULIA WILLIAMS, 11th and 12th, 640 Bridge St. .	1886	600
ELIZABETH F. GARRA, 11th and 12th, 109 Bartlett St.	1893	600
AGNES T. FAY, 9th and 10th, Tenth St.	1891	600
ELIZABETH F. BLANDIN, 3d and 4th, 61 Durant St. .	1896	500
MARY E. WALSH, 6th and 7th, 3 Corner St. . . .	1897	450

WEST SIXTH STREET SCHOOL.

West Sixth Street, between Coburn and Jewett Streets, Centralville.

STELLA J. ALLEN, Principal, 1st and 2d, 115 Third St. .	1879	\$650
LIZZIE F. LAMERE, 2d and 3d, 829 Bridge St. . . .	1885	600
MARION S. KEYES, 4th and 5th, 102 Third St. . . .	1888	600
MARY J. CALLAHAN, 5th and 6th, 117 Durant St. .	1895	600

TENTH STREET SCHOOL.

Corner Tenth and Varnum Streets, Centralville.

MARY F. BEANE, Principal, 1st, 212 Tenth St. . . .	1879	\$650
FANNIE H. MURPHY, 2d and 3d, 42 Twelfth St. . . .	1889	600
Alice A. Holtham, 4th and 5th, 1107 Bridge St. .	1887	600
ELLA A. BAILEY, 6th, 55 Varnum St.	1869	600

ROLL OF TEACHERS.

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LAKEVIEW AVENUE SCHOOL.

Lakeview Avenue, Centralville.

MARIETTA F. CROWLEY, Principal, 1st and 2d, 33 Marion St.	1879	\$650
AGNES T. COURTNEY, 3d and 4th, 11 Marsh St.	. . . . .	1891	600
MARGARET J. MCCLUSKEY, 5th, 161 Lakeview Ave.	. . . . .	1890	600
LILLIAN C. WHOLEY, 6th, 359 Stevens St.	. . . . .	1894	600

BILLINGS STREET SCHOOL.

MALVINA LAMERE, Principal, 5th and 6th, 290 Bridge St.	. . . . .	1894	\$625
ANNIE M. ROBBINS, 2d, 3d and 4th, 62 Twelfth St.	. . . . .	1895	600

CENTRALVILLE KINDERGARTEN.

Parker Block, Bridge Street.

NETTIE M. CONANT, Principal, 21 Osgood St.	. . . . .	1892	\$500
CLARA M. EVERETT, 945 Middlesex St.	. . . . .	1996	450
JOSEPHINE M. GOULD, 162 Branch St.	. . . . .	1897	350

HIGHLAND KINDERGARTEN.

ELIZABETH A. WILSON, 77 Dover St.	. . . . .	1893	\$500
EDITH A. ANDREWS, 278 High St.	. . . . .	1897	350

MOODY SCHOOL KINDERGARTEN. NO. 1.

MARY C. WALKER, Principal, 100 Appleton St.	. . . . .	1893	\$500
ELLA L. PRATT, Assistant, Reading, Mass.	. . . . .	1893	450

MOODY KINDERGARTEN. NO. 2.

LOUIE I. SMITH, Principal, 69 Nichols St.	. . . . .	1895	\$500
EDITH A. HOWITT, 95 Myrtle St.	. . . . .	1897	350

TRRAINING SCHOOL KINDERGARTEN.

MABEL D. NICKERSON, Principal, 33 Nesmith St.	. . . . .	1893	\$500
S. HORTENSE TABOR, 82 Riverside St.	. . . . .	1896	450

BARTLETT SCHOOL KINDERGARTEN.

E. BELLE PERHAM, Principal, 100 Riverside St.	. . . . .	1893	\$500
CLARE S. REED, 11 Nesmith St.	. . . . .	1896	450

AGAWAM STREET KINDERGARTEN.

SARAH G. SPARKS, Principal, 59 Elm St.	. . . . .	1894	\$500
GERTRUDE ROBERTS, 52 Parker St.	. . . . .	1897	450

CHAPEL STREET KINDERGARTEN.

MARIETTA G. GORMLEY, Principal, 22 Lyon St.	. . . . .	1895	\$500
KATHARINE C. EARLEY, 34 Concord St.	. . . . .	1896	450

ROLL OF TEACHERS.

FRANKLIN KINDERGARTEN.

N. GRACE TAYLOR, Principal, 118 Bartlett St.	1895	\$500
HELEN W. NOYES, 49 Nesmith St.	1896	450

PAWTUCKETVILLE KINDERGARTEN.

M. ETTA KING, Principal, 223 Stackpole St.	1895	\$500
GRACE B. ALVORD, 113 Varnum Ave.	1896	450

LINCOLN SCHOOL KINDERGARTEN.

ELLEN J. PIPER, Principal, 35 Canada St.	1894	\$500
ELSIE CRAGIN, Assistant, 114 South Walker St.	1895	450

WORTHEN STREET KINDERGARTEN.

MARY A. CRONIN, Principal, 102 Cross St.	1894	\$500
ROSEMARY LENNON, Assistant, 39 Carter St.	1895	450

SUPERVISOR OF KINDERGARTENS.

ANNA W. DEVEREAUX, 73 Nesmith St.	1893	\$500
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TEACHERS OF PENMANSHIP.

THOMAS M. GRAVES, 114 Beech St.	1883	\$1,250
JOHN J. HUNT, 172 Pleasant St.	1894	900

MUSICAL DIRECTOR.

F. R. RIX, 28 Central St.	1896	\$1,200
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TEACHER OF DRAWING.

OLIVE E. UNDERHILL, 117 Branch St.	1887	\$1,250
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TEACHER OF SEWING.

IDA J. FLINT, 200 Liberty St.	1880	\$800
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MILITARY INSTRUCTOR.

ALEXANDER GREIG, JR., 52 Cambridge St.	1891	\$250
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TEACHER OF PHYSICAL CULTURE AND ELOCUTION.

EMMA M. HUNTLEY, 249 Branch St.	1894	\$500
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TRAINING SCHOOL GRADUATES.

CLASS OF JANUARY, 1896.

Ida L. Samuels, Grammar, cor. Fifth Ave and Robert Street.

Goldie M. Gardner, Grammar, 56 Willie Street.

Alice M. Magoon, Primary, 64 Oak Street.

Mary A. Fay, Grammar, Tenth Street.

Gertrude C. Ring, Primary, 56 Oak Street.

Nellie C. Mahoney, Grammar, 17 North Street.

ROLL OF TEACHERS.

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CLASS OF JUNE, 1896.

Emily S. Abbott, Primary, 95 Boston Road.

Gertrude L. Sponholtz, Primary and Grammar, 16 Marsh Street.

Lena May Robinson, Primary and Grammar, 68 S. Walker Street.

Lura E. Aldrich, Primary, 27 Vernon Street.

CLASS OF JUNE, 1897.

Marguerite J. Cronin, 228 Plain Street.

Grace C. Delaney, 791 Broadway.

Annie T. Delay, 87 Mt. Washington Street.

Mabel H. Ela, 407 Walker Street.

Margaret C. Fox, 8 Eddy Street.

Julia G. Halloran, 546 E. Merrimack Street.

Daisy B. McBrayne, 24 Beach Street.

Helen J. O'Hearn, 566 Market Street.

Bride T. Sweeney, 102 Pleasant St.

Lulu Turner, 21 Kimball Ave.

Carrie B. Price, Hadley Street.

SALARIES OF TEACHERS.

HIGH SCHOOL.

Principal	\$2,500 00
Men Assistants	2,200 00
First Woman Assistant	900 00
Other Women Assistants, first year	650 00
Assistants, second year	700 00
Assistants, third year	800 00

GRAMMAR SCHOOLS.

Principals (men)	\$1,300 00 to \$2,000 00
Assistants, first year	450 00
Assistants, second year	500 00
Assistants, third year and after	600 00
Teacher of Penmanship	1,250 00
Teacher of Drawing	1,250 00
Teacher of Music	1,200 00

PRIMARY SCHOOLS.

Teachers, first year	\$450 00
Teachers, second year	500 00
Teachers, third year and after	600 00
Principals of two rooms	625 00
Principals of three or more rooms	650 00

TRAINING SCHOOL.

Principal	\$2,000 00
Two Assistants	900 00
One Assistant	800 00

ROLL OF TEACHERS.

KINDERGARTENS.

Principals	\$500 00
Assistants, first year	350 00
Assistant, after first year	450 00

TEMPORARY TEACHERS.

Men teachers, for every school-day's service	\$3 00
Women teachers in High School, for every school-day's service	1 75
Women teachers in other schools, for every school-day's service	1 25
Graduates of Training School, after three months' service	2 25

EVENING SCHOOLS.

Principal, High School, per evening	\$5 00
Principals, Elementary Schools, per evening	2 00
Assistants, High School, per evening	2 00
Women Assistants, Elementary Schools, per evening	1 25

TEXT-BOOKS USED IN THE PUBLIC SCHOOLS.

PRIMARY SCHOOLS.

First Reader, New Franklin Series.	American Music Reader.
Second Reader, New Franklin Series.	American Music Chart.
Advanced 2d Reader, New Franklin Series.	Blaisdell's Child's Book of Health.
Franklin Primary Arithmetic.	Heath's Vertical Writing Books.
Monroe's Reading Chart.	

GRAMMAR SCHOOLS.

Third Reader, New Franklin Series.	Frye's Common School Geography.
Fourth Reader, New Franklin Series.	Goodrich's Child's Book of History.
Intermediate Reader, New Franklin Series.	Scudder's History and Short History of the United States.
Fifth Reader, New Franklin Series.	Fiske's History of the United States.
Scudder's Fables and Folk Stories.	Thomas's History of the United States.
De Foe's Robinson Crusoe.	Union Series of Physiologies.
Burrough's Birds and Bees.	Wentworth's Elementary Algebra.
Hawthorne's Wonder Book.	Worcester's New Pronouncing Speller.
American Literature, Masterpieces.	Worcester's Comprehensive Dictionary.
Bradbury's Eaton's Practical Arithmetic.	Thomson's Intellectual Arithmetic.
Tarbell's Lesson's in English.	Werner Mental Arithmetic.
Southworth and Goddard's Grammar.	Spencerian Writing Books,
Butler's Elementary Geography.	American Music Readers.
Butler's Grammar School Geography.	Meservey's Book-keeping.
Frye's Primary Geography.	Gifford's Elementary Physics.

HIGH SCHOOL.

Latin Grammar, Allen and Greenough.	Manual of English Literature, Arnold.
Cæsar, Allen and Greenough.	Hand-Book of English Literature, Underwood.
Cicero, Allen and Greenough.	Selected American Poems, Scudder.
Ovid, Allen and Greenough.	Selected Ballads and Lyrics, Lodge.
Virgil, Allen and Greenough.	Exercises in English, Strong.
Virgil, Brice.	Tales from Shakespeare, Lamb.
First Latin Book, Collar and Daniell.	Scott's Lady of the Lake, Tufts.
Gate to Cæsar, Collar.	Scott's Marmion, Dalgleish.
Latin Composition, Part I, Daniell.	Eliot's Silas Marner, Norris.
Latin Composition, Part II, Daniell.	

Latin Composition, Collar.
 Latin Lexicon, White.
 Latin for Sight Reading, Tomlinson.
 Greek Grammar, Goodwin.
 Greek Reader, Goodwin.
 Greek Lessons, White.
 Homer, Iliad, Seymour.
 Greek Lexicon, Liddell and Scott.
 Greek Composition, Woodruff.
 Otto's French Grammar, Bocher.
 Methode Berlitz, Part I.
 Methode Berlitz, Part II.
 French Reader, Super.
 Easy French Readings, Fisher.
 College Plays, Bocher.
 French Composition, Grandgent.
 French Dictionary, Heath.
 Second French Course, Chardenal.
 Readings from French History, Super.
 La Belle Nivernaise, Daudet.
 La Famille de Germandre, Sand.
 Bug-Jargal, Hugo.
 Les Precieuses' Ridicules, Moliere.
 La Voyage de Monsieur Perrichon, Labiche
 Martin.
 LaFontain's Fables, Mme. Beck's edition.
 Jeanne d'Arc, Lamartine.
 French Lyrics, Bowen.
 Le Cure d'Tours, Balzac.
 Pecheur d'Isiande, Lati.
 Eisenbach's German Lesson, Collar.
 German Dictionary, Elwell.
 German Grammar, Otto.
 Die Schonsten Deutschen Lieder, Wenckebach.
 Burke's Speeches, Delby.
 Lessons in English, Buehler.
 Principles of Rheotoric, Hill.
 Lessons in English, Lockwood.
 English Grammar, Meiklejohn.
 Pope's Iliad.
 Sir Roger de Coverley Papers.
 Cooper's Last of the Mohicans.
 Paradise Lost, Milton.
 Carlyle's Essay on Burns.
 Vicar of Wakefield, Goldsmith.
 De Quincey's Revolt of the Tartars.
 Macbeth, Shakespeare.
 Southey's Life of Nelson.
 Viri Romæ, Rolfe.
 Greek History, Oman's.
 Ancient History, Myers'.
 Sanderson's History.
 Worman's French Grammar.
 Lessons in Astronomy, Young.
 Exercises. No. 1, Grandgent.
 Story of the Odyssey, Church.
 Sketch Book, Irving.
 Twice Told Tales, Hawthorne.
 Ivanhoe, Scott.
 Kenilworth, Scott.
 Woodstock, Scott.
 Talisman, Scott.
 De Foe's History of the Plague, Carpenter.
 Irving's Tales of a Traveler, Carpenter.
 First Bunker Hill Oration, Webster.
 Shakespeare's Plays, Hudson.
 Select Essays of Macauley, Chalmers.
 Milton's Lyrics, Hodgkins.
 Immensee, Storm's.
 Tales of a Wayside Inn, Longfellow.
 Thanatopsis, Bryant.
 Book-keeping, Meservay.
 Outlines of History, Swinton.
 History of Rome, Allen.
 History of Greece, Pennell.
 English History, Montgomery.
 Civil Government, Martin.
 Manual of the Constitution, Andrews.
 Arithmetic, Wentworth-Hill.
 Academic Algebra, Wells.
 Higher Algebra, Wells.
 Geometry, Plane and Solid, Wentworth.
 Surveying, Davies.
 Trigonometry, Bradbury.
 Physics by Experiment, Shaw.
 School Physics, Avery.
 A Text-Book of Physics, Hall-Bergen.
 Elements of Chemistry, Avery.
 Qualitative Analysis, Hill.
 Geology, Le Conte.
 Botany, Gray.
 Herbarium, Wilson.
 Physiology, Kellogg.
 Tarr's First Book in Physical Geography.
 General History, Myers'.
 Nepos.
 Wonder Book, Hawthorne.
 Hereward the Wake, Kingsley.
 Westward Ho, Kingsley.
 Guy Mannering, Scott.
 Elements of Physics, Avery.
 Greek Lexicon, White.
 Greek Composition, Higley.
 Elements of Chemistry, Shepard.
 Worcester's Dictionary.
 American Music Reader.
 Dana's Geological Reader.
 French Grammar, Grandgent.
 Grammaire Francaise, Larive et Fleury,
 2ne An.
 Le Conscript de 1813, Erckmann-Chatrian.

**SUMMARY OF THE ANNUAL RETURNS OF THE PUBLIC SCHOOLS OF THE CITY OF LOWELL,
FOR THE YEAR ENDING DECEMBER 24, 1897.**

SCHOOL.	LOCATION.	No. of pupils belonging Dec., 1897.						Whole No. Enrolled.						Average No. of pupils belonging to school since Jan. 1, 1897.						Average daily attendance.						No. over 14 years of age.	No. between 10 and 14 years of age.	No. between 6 and 10 years of age.	No. having children of age.	Number under 6 years of age.	Per cent. of attendance.
		Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.									
High	Kirk and Anne Sts.....	351	424	775	323	398	721	470	574	1044	328	380	708	318	362	680	41	271	16	163	1	1003	41	... ..	... ..	... ..	96	
Bartlett (Gram)....	Vannalancit St.	269	234	503	232	212	444	326	296	622	222	210	432	210	192	402	58	96	23	22	35	128	379	115	... ..	... ..	93		
PRIMARIES.	Cross St., near Mt. Vernon St.....	106	115	221	89	73	162	124	137	261	82	76	158	79	72	151	91	21	19	32	40	..	1	46	174	40	95				
	Adams and Common Sts.....	137	97	234	97	63	160	146	108	254	86	55	141	80	50	130	50	20	45	19	1	4	140	60	50	94					
	Morrill	50	56	106	39	45	84	61	65	126	35	40	75	32	37	69	36	20	17	10	..	3	12	106	5	92					
	School St. bet. Pawtucket & Bowers Sts.	293	268	561	225	181	406	331	310	641	203	171	374	191	159	350	177	21	59	94	69	1	8	198	340	95	93.2				
	Totals for Primaries.....	378	355	733	355	314	669	476	429	915	348	330	678	333	330	663	46	142	40	72	33	26	187	602	126	... ..	93			
Butler (Gram)....	Gorham St.	68	57	125	64	46	110	85	73	168	54	44	98	50	41	91	28	17	16	22	13	..	..	11	132	15	93		
PRIMARIES.	Cor. Agawam and Barrington Sts.....	121	117	238	109	106	225	185	163	348	129	112	241	116	101	217	110	32	23	..	..	..	..	28	263	58	91
	Carter St.	93	86	179	61	52	113	101	92	193	53	51	113	53	51	104	55	..	14	29	21	..	1	22	135	35	92				
	London St.	136	136	272	88	75	163	166	138	304	98	90	188	93	85	178	132	..	32	42	68	..	..	33	222	49	94		
	Lyon St.	90	79	169	56	52	108	95	85	180	58	49	107	55	45	100	47	..	11	37	15	..	..	19	138	23	93		
	Totals for Primaries.....	508	475	983	388	331	719	632	551	1183	399	348	747	367	323	690	332	17	183	162	130	..	1	113	990	180	93				
	Lawrence St.	197	179	367	178	150	328	248	203	451	172	149	321	161	136	297	28	..	55	29	15	37	21	91	263	13	93				
Training (Gram)....	PRIMARIES.	Ames St.	110	97	207	70	62	132	118	104	222	82	66	148	77	59	136	24	8	15	28	31	..	3	31	161	27	91			
		Central St. opp. Hudson St.	108	123	231	73	94	167	119	132	251	77	87	164	69	78	147	47	4	20	33	27	..	2	33	188	28	90			
		Charles St., near Lawrence St.	94	102	196	78	81	159	134	134	208	71	68	139	62	59	121	69	23	49	12	48	..	2	47	122	25	87			
	Totals for Primaries.....	312	322	634	221	237	458	371	370	741	230	221	451	208	196	404	130	35	84	73	106	..	7	111	471	80	89.1				

SUMMARY OF THE ANNUAL RETURNS OF THE PUBLIC SCHOOLS.—Continued.

Edson (Gram).	Cor. Highland and South Sts.	247	245	492	212	244	456	313	323	636	214	232	446	201	218	419	31	113	45	26	28	10	118	421	83	... 94		
PRIMARIES.																												
Chapel St., opp. Pollard St.	Charles St., near Gorham St.	47	56	103	37	39	76	54	65	119	37	35	76	36	71	24	... 16	14	14	14	14	14	14	14	14	14	14	
Charles St., near Eliot St.	Cottage St.	91	90	181	72	55	127	114	105	219	69	59	128	66	54	120	55	... 38	19	45	13	13	13	13	13	13	13	13
Cor. Cottage and Chapel Sts.	Cor. Summer and Favor Sts.	32	54	86	20	26	46	34	58	92	23	35	58	19	29	48	11	2	4	18	13	13	13	13	13	13	13	13
Totals for Primaries.	Merrimack St., opp. Colburn St.	282	325	607	204	198	402	358	371	709	198	205	403	183	187	370	216	2	100	135	105	1	6	126	437	140	91	
Green (Gram).	Cor. Cabot and Ford Sts.	301	242	543	269	245	514	370	299	669	253	201	454	243	188	431	73	74	52	21	32	14	210	410	49	... 94		
PRIMARIES.	Cor. Cheever and Tucker Sts.	158	121	279	78	59	137	194	121	315	89	66	155	80	55	135	98	... 36	45	22	2	29	62	177	47	91		
Cabot St.	Cor. Kirk and Lee Sts.	121	88	209	48	25	73	125	94	219	48	34	82	43	31	74	209	... 10	10	13	5	7	28	109	36	88		
Cheever St.	Worthen St., bet. Bdway & Market Sts.	64	48	112	39	32	71	78	58	136	40	27	67	37	24	61	16	... 24	25	21	1	1	17	53	17	91		
Kirk St.	Totals for Primaries	144	162	306	91	103	194	187	180	367	82	92	174	79	84	163	90	13	41	56	39	... 5	63	244	51	92		
Highland (Gram).	Cor. Pine and Wilder Sts.	487	419	906	256	219	475	584	483	1037	259	219	478	239	194	433	233	13	101	136	95	8	42	... 583	151	90	2	
PRIMARIES.	Dover St., near Grove St.	369	385	754	352	316	698	455	482	937	323	350	679	306	322	628	55	134	49	78	46	3	308	534	95	... 92		
Pine St.	Cor. Pine and Gibson Sts.	85	113	198	49	57	106	106	128	234	63	53	116	56	48	104	29	25	11	64	45	... 1	... 1	8	173	53	90	
Franklin St.	Junction of Branch and Middlesex Sts.	7	9	16	31	40	71	31	44	75	30	39	69	28	35	63	16	11	48	35	35	16	16	16	59	16	92	-5
Plain St.	Cor. Chelmsford and Plain Sts.	133	113	246	99	111	210	163	164	337	98	132	191	91	77	168	65	56	24	48	62	... 39	266	227	29	88		
Powell St.	Powell St., near Liberty St.	151	120	271	116	92	208	184	159	343	102	82	184	92	75	167	56	21	37	30	... 30	... 17	104	40	92	-5		
Totals for Primaries.	Cor. Pine and Wilder Sts.	433	429	862	337	343	680	569	581	1150	332	315	647	303	279	582	297	88	200	184	186	... 16	129	723	176	91		
A. Lincoln (Gram) PRIMARIES.	Chelmsford St., near Lincoln St.	179	224	403	161	211	372	249	288	537	165	201	366	161	185	339	22	103	20	25	3	159	358	20	... 92			
Howard St.	Howard St., near Hale St.	113	121	234	81	81	162	148	159	307	79	83	162	69	72	141	79	.. 73	30	37	1	9	53	220	25	87		
Totals for Primaries.	Cor. Rogers and High Sts.	113	121	234	81	81	162	148	169	307	79	83	162	69	72	141	79	.. 73	30	37	1	9	53	220	25	87		
Moody (Gram) PRIMARIES.	Cor. Rogers and High Sts.	215	205	420	188	181	369	266	243	509	181	176	357	167	162	329	51	58	31	36	19	... 135	310	64	... 92			
Fayette St., bet. Chestnut and Everett Sts.	High St., bet. Chestnut and Everett Sts.	66	40	106	41	25	66	80	44	124	39	23	62	36	21	57	53	... 35	50	50	50	50	50	50	50	50	50	
High St.	Sycamore St., near Wentworth Ave.	38	38	76	35	34	69	51	57	108	27	28	55	25	25	50	53	... 7	4	5	10	12	12	12	12	12	12	
Oaklands St.	Cor. Pond and High Sts.	30	19	49	27	13	40	37	21	58	29	13	42	11	37	11	27	21	23	30	24	... 1	1	48	9	91		
Pond St.	Totals for Primaries.	206	169	375	164	123	287	264	214	478	152	118	270	138	103	251	122	31	72	56	61	... 4	56	334	84	91		
Pawtucket (Gram) PRIMARIES.	Cor. Mammoth Road and Fourth Ave.	133	137	270	135	116	251	167	163	330	120	113	233	116	110	226	35	25	21	29	1	114	188	28	... 97			
Mammoth Road.	Mammoth Road, Gram. School Building.	123	109	232	107	90	197	150	138	288	88	83	171	82	65	147	107	16	40	38	17	... 21	241	24	26	93		
Totals for Primaries.		123	109	232	107	90	197	150	138	288	88	83	171	82	65	147	107	16	40	38	17	... 21	241	24	26	93		

SUMMARY OF THE ANNUAL RETURNS OF THE PUBLIC SCHOOLS.—Continued.

SCHOOL.	LOCATION.	Whole No. of pupils belonging Dec., 1897.						Average No. of pupils being long to school since Jan. 1, 1897.						Average daily attendance.						No. entered not from other publ. sch'l. 1.	No. left from lower grade.	No. sent to other public schools of same grade.	No. sent to higher grade.	No. of years of age.	No. between 10 and 14 years of age.	No. between 6 and 10 years of age.	Number under 6 years.	Per cent. of attendance.						
		Whole No. Enrolled.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.														
Varnum (Gram). .	Myrtle and Beach Sts., Centralville.....	378	394	772	333	317	650	471	450	921	333	321	664	314	303	617	89	166	33	40	34	17	217	522	182	..	94							
PRIMARIES. .	Billing St., near Hildreth St., bet. West and Lilley Ave.	68	73	141	52	38	90	79	78	157	41	42	83	38	38	76	14	27	17	..	4	13	120	20	91	37	93							
Billings St.	Lakeview Ave., bet. West and Lilley Ave.	184	123	307	106	87	193	135	135	326	107	122	172	99	116	160	19	28	44	2	9	114	209	100	37	93								
Lakeview Ave.	Tenth St., cor. Varnum St.	112	99	211	77	90	167	132	132	264	78	69	147	70	63	133	46	25	48	24	..	26	213	23	90	213	23							
Tenth St.	W. Sixth St., bet. Coburn and Jewett Sts.	112	105	227	88	105	165	152	152	286	88	71	159	82	64	146	55	9	50	41	35	6	75	190	15	92	15	92						
Totals for Primaries		486	490	886	323	292	615	554	479	1033	314	247	561	289	226	515	232	37	111	142	2	9	228	732	100	91	1							
MIXED SCHOOLS. .	Cor. Middlesex and Connell Sts	68	63	131	54	50	104	72	68	140	43	42	85	38	35	73	131	..	9	6	22	..	2	21	93	..	15	86						
Middlesex Village Lexington Ave.	Cor. Middlesex and Connell Sts	24	12	36	21	12	33	27	14	41	15	10	25	14	9	23	36	..	5	..	3	..	4	17	17	..	3	92						
Totals for Mixed Schools		92	75	167	75	62	137	99	82	181	58	52	110	52	44	96	167	..	14	6	25	..	6	38	110	..	18	89						
KINDERGARTENS. .	Agawam St., Primary School Building.	32	33	65	17	16	33	32	33	65	18	20	38	14	16	30	65	..	17	..	..	..	..	..	..	..	..	65	80	
Asgawan St.	Parker Block, Bridg. St., No. 44	57	69	126	32	34	66	58	71	124	30	32	62	27	34	61	126	..	3	..	..	..	..	..	..	..	..	1	128	88
Bridge St.	Chapel and Keene Sts.	56	32	88	24	14	38	37	95	130	21	21	40	16	17	33	86	..	7	38	4	..	..	..	..	..	..	3	92	86
Chapel St.	Dover St., bet. Branch and Grove Sts.	41	45	86	20	16	36	46	46	92	19	21	40	16	17	33	86	..	6	35	..	..	..	..	..	..	..	2	90	83
Dover St.	Bartlett St., School Buildg., Wannalancet St.	42	55	97	12	26	38	43	56	99	16	23	34	14	20	34	97	..	2	27	4	2	97	87			
Bartlett St.	Franklin St., School Building, Branch St.	35	44	79	19	17	36	41	42	83	18	17	35	16	12	28	79	..	4	20	2	82	80			
A. Lincoln.	Lincoln School Building, Chelmsford St.	46	54	100	23	27	50	48	54	102	22	24	46	18	22	40	100	..	2	23	2	8	92	86		
Moody No. 1.	Moody School Building, Rogers St.	48	42	90	20	17	37	48	42	90	18	19	37	14	14	28	99	..	36	..	..	..	..	..	..	..	..	1	37	79
Moody No. 2.	Moody School Building, Rogers St.	46	27	73	16	13	29	46	47	73	15	11	26	12	8	20	73	..	12	..	..	..	..	..	..	..	..	1	73	79
Pawtucket Church Building.	Pawtucket Church Building.	25	31	56	12	14	26	27	31	58	11	14	25	8	12	20	56	..	2	16	..	..	..	..	..	..	..	..	56	82
Training School Building.	Training School Building.	51	37	90	12	15	25	32	32	95	13	13	32	15	10	20	73	..	5	25	3	90	81			
Worthen St.	Worthen St., School Building.	31	44	75	32	16	28	32	44	76	12	14	26	12	10	20	73	..	1	15	1	4	72	77		
Totals for Kindergartens		510	515	1025	339	225	454	530	522	1057	219	222	441	183	187	370	1025	..	32	299	19	22	973	81	
SUMMARY.—High School.	Agawam St., Primary School Building.	351	424	775	323	308	721	470	574	1044	328	380	708	318	362	680	41	271	16	163	1	1	1003	41	..	..	..	..	96	
Grammar Schools.	Parker Block, Bridg. St., No. 44	2666	2591	5257	2415	2336	4751	3341	3186	6327	2337	2283	4620	2205	2146	3351	488	976	358	351	318	1	1670	3975	..	..	..	..	94	
Primary Schools.	Cor. Middlesex and Connell Sts	3243	3037	6280	2309	2093	4404	3491	3026	767	2079	14204	1812	180	980	1050	916	13	102	1035	4677	1987	13	102	1035	4677	1987	13	102	1035	4677	1987		
Mixed Schools.	Cor. Middlesex and Connell Sts	92	75	167	75	62	137	99	82	181	58	52	110	52	44	96	167	..	6	25	..	6	38	110	..	18	89	..	109	281	5101	5662	2005	31
Totals, not including Kindergartens		1332	6127	12479	8022	8491	16513	7851	7468	15319	4977	4725	9702	4654	4366	9020	1427	1371	15070	1259	109	2781	5101	5662	2005	31			





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